

2/55

FIG. 4

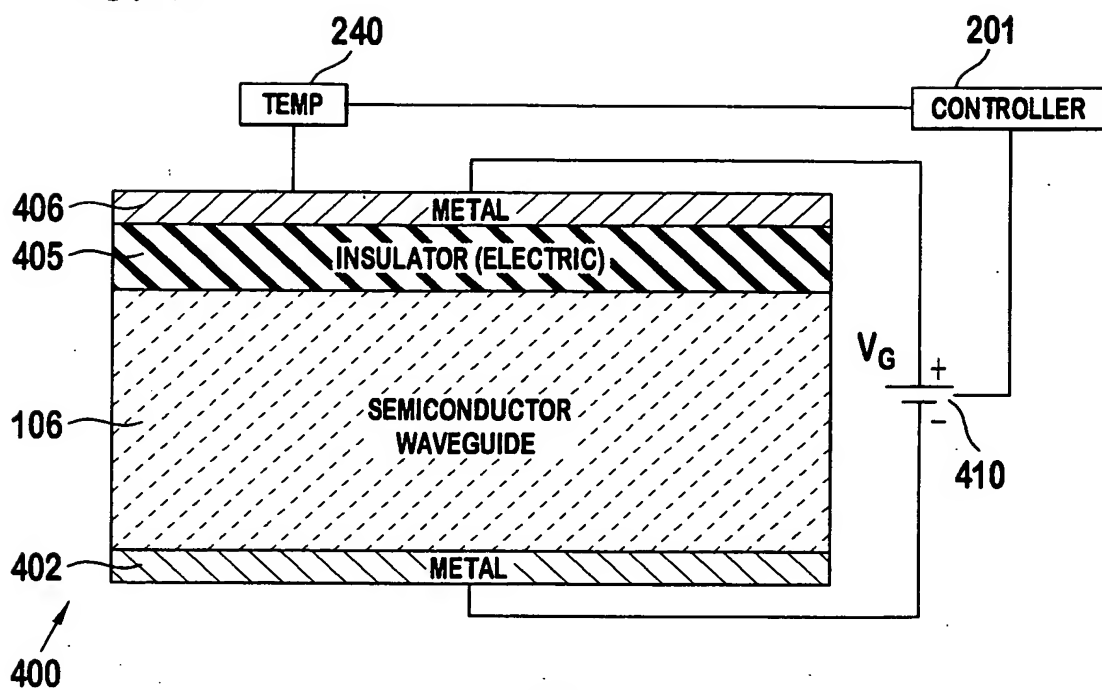
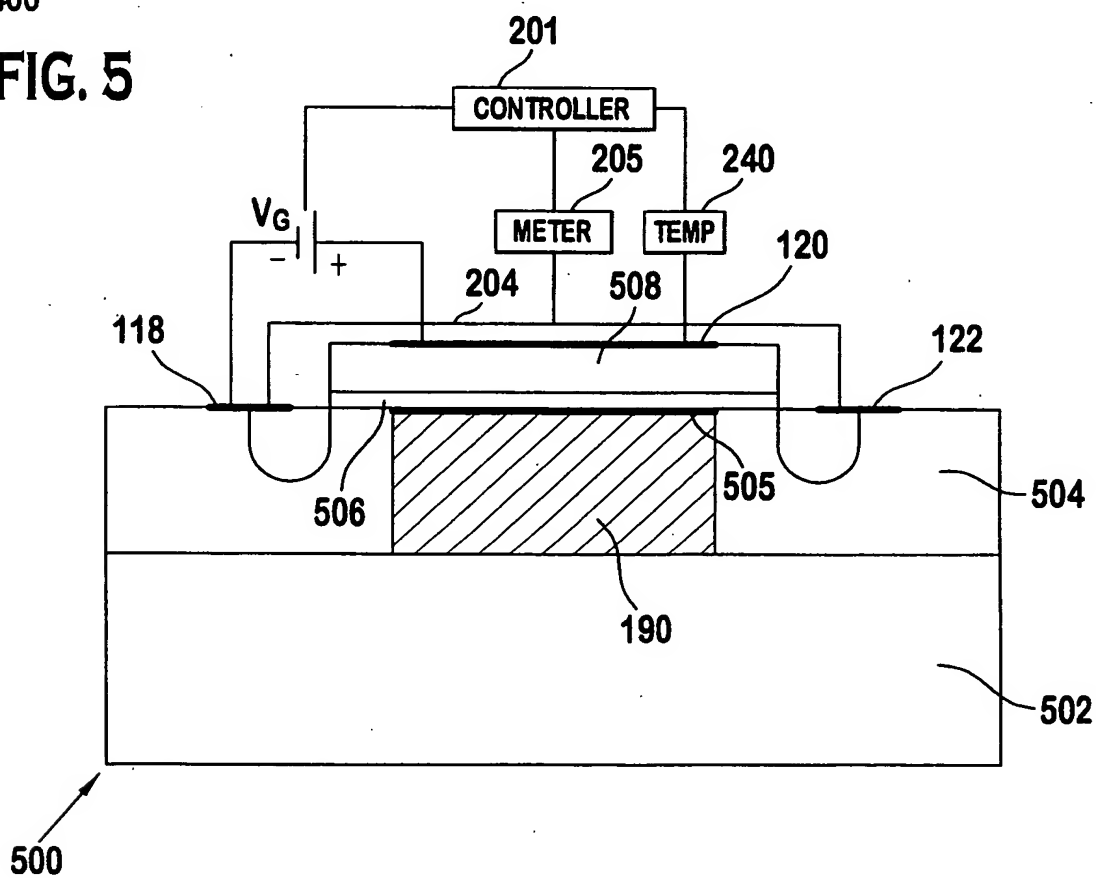


FIG. 5



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FIG. 6

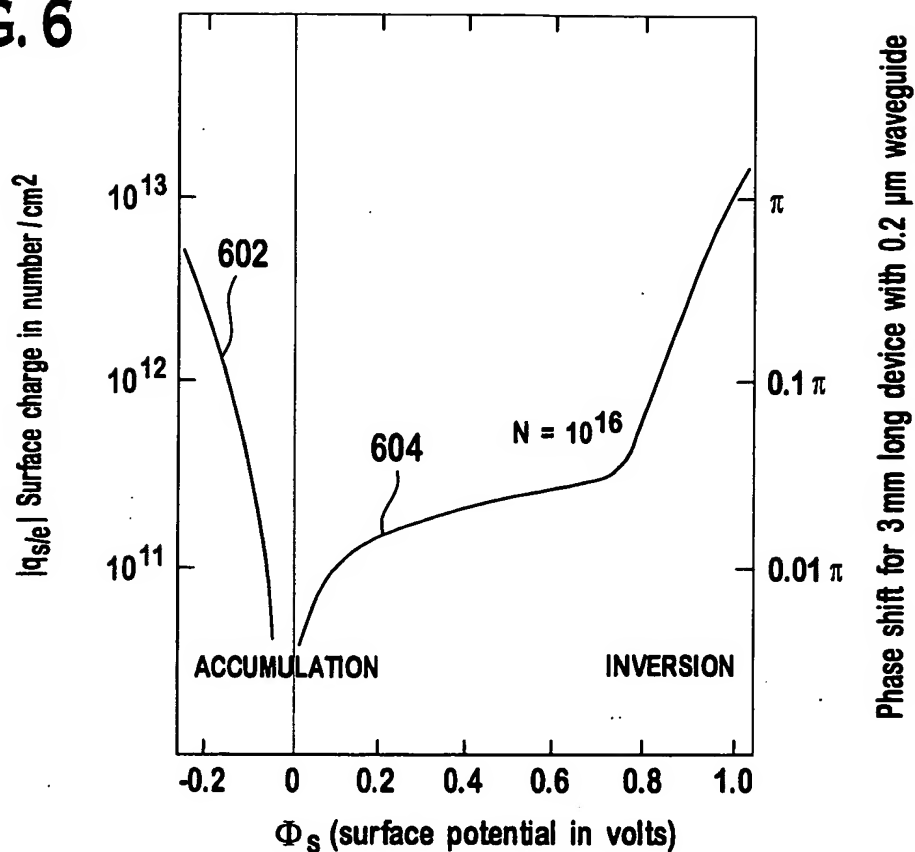
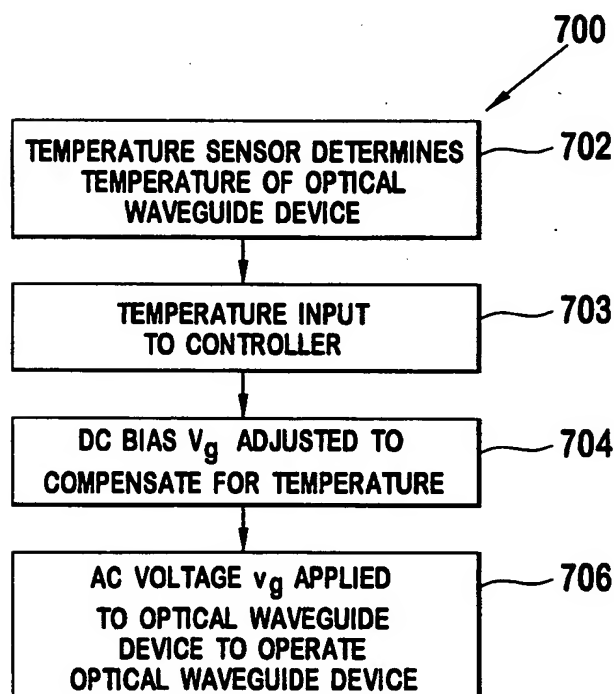


FIG. 7



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FIG. 8

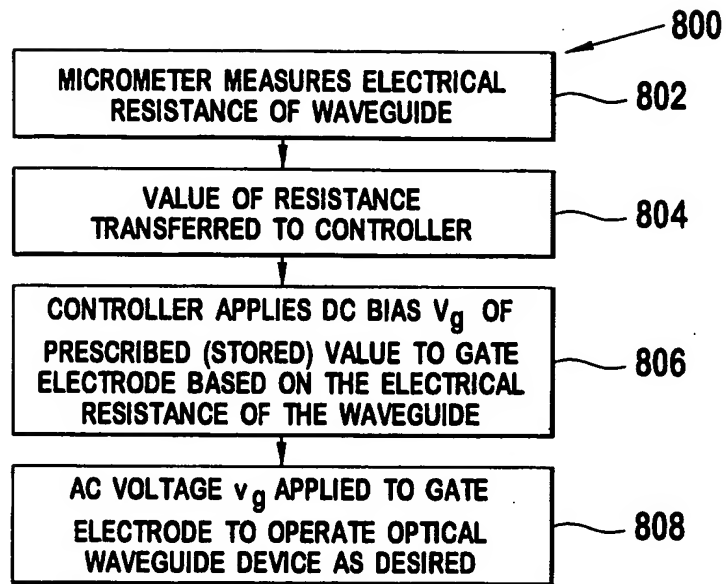


FIG. 9

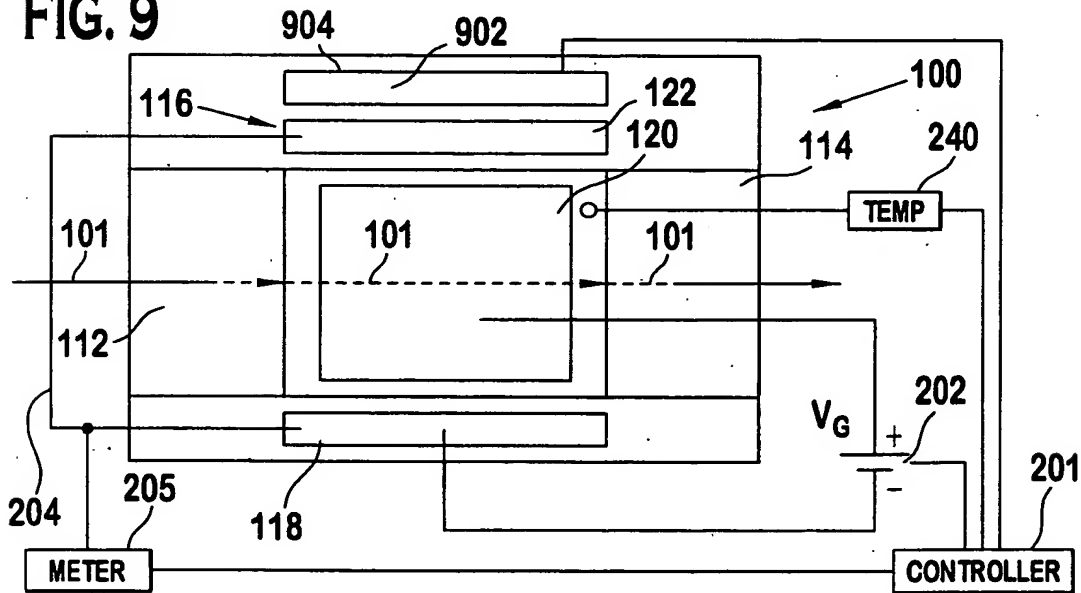


FIG. 10

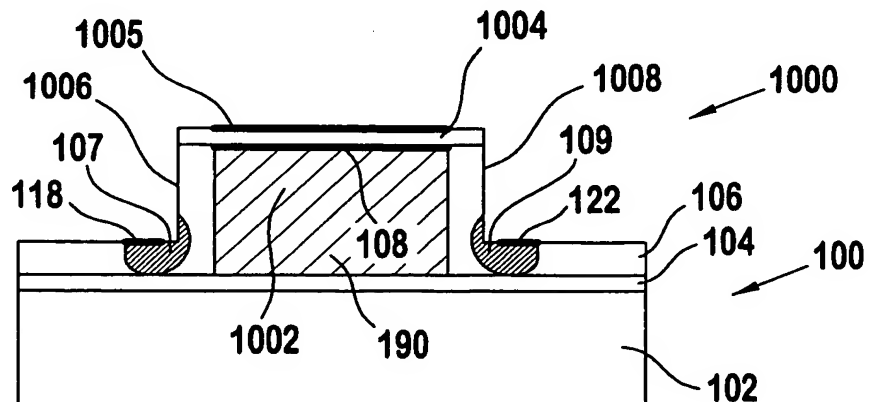


Diagram illustrating a tapered optical waveguide structure. The structure consists of a central core region (106) flanked by two insulating layers: the SECOND ELECTRICAL INSULATOR LAYER (110) on top and the FIRST ELECTRICAL INSULATOR LAYER (104) on the bottom. The core has a core index n . The total height of the structure is denoted by h . The tapering is defined by an angle θ_1 at the top and θ_2 at the bottom. The refractive index profile is indicated by K_2 and K_y .

FIG. 13

1300

116

122

1304

1301

114

240

TEMP

1306

1310

1312

1314

1308

15

112

204

118

1320

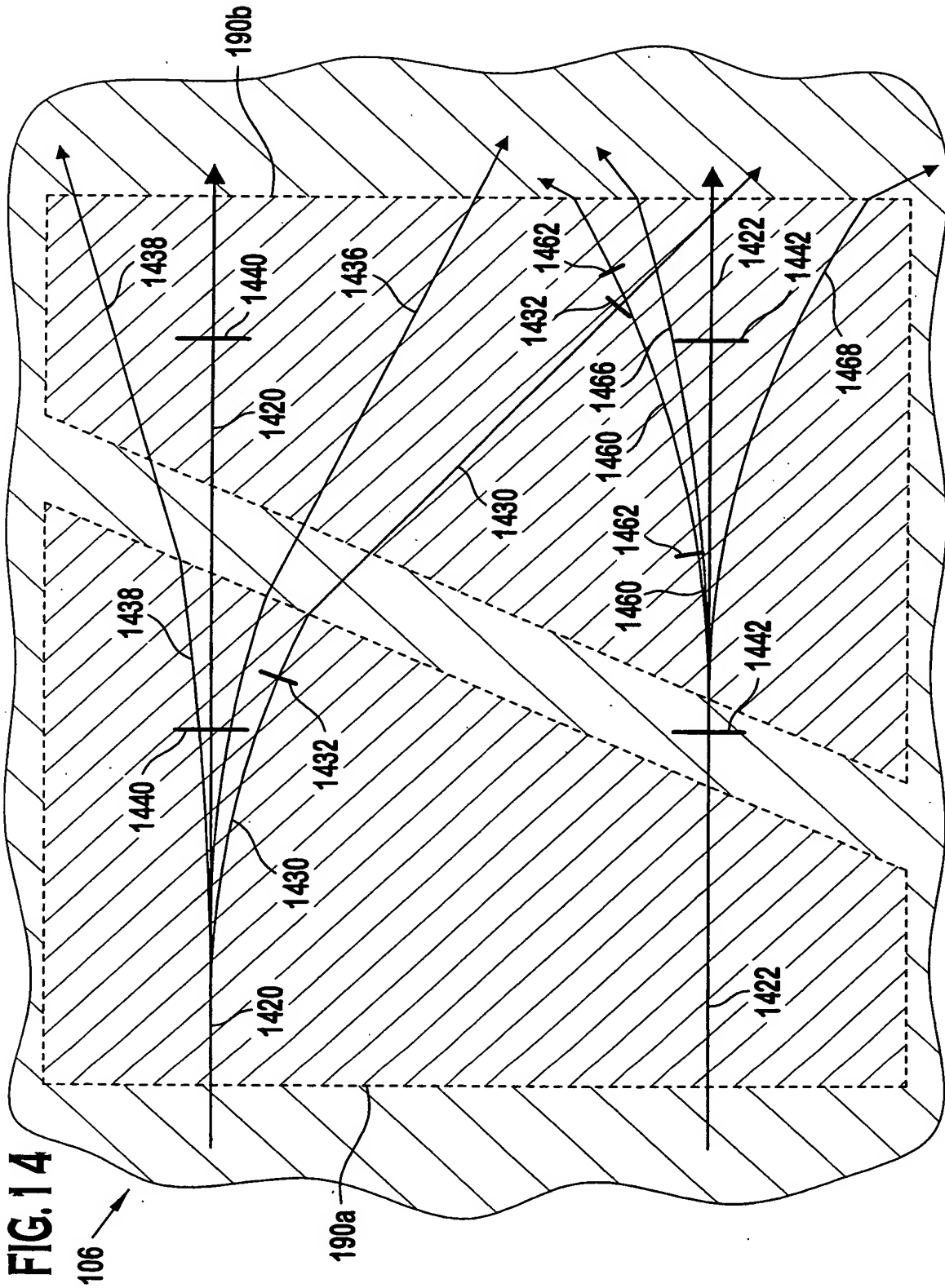
1322

METER

201

CONTROLLER

6/55



7/55

FIG. 15A

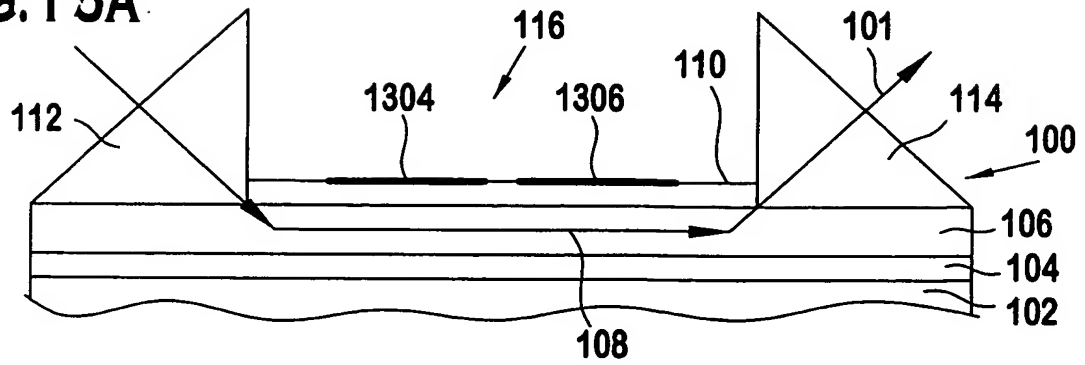


FIG. 15B

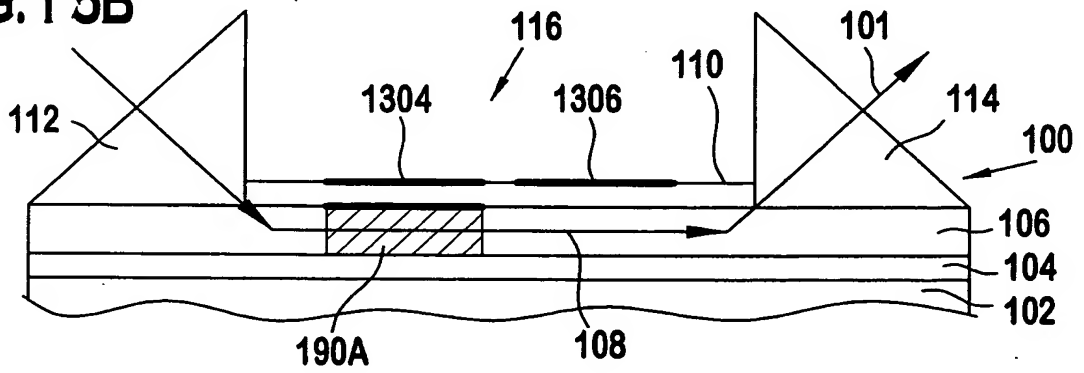


FIG. 15C

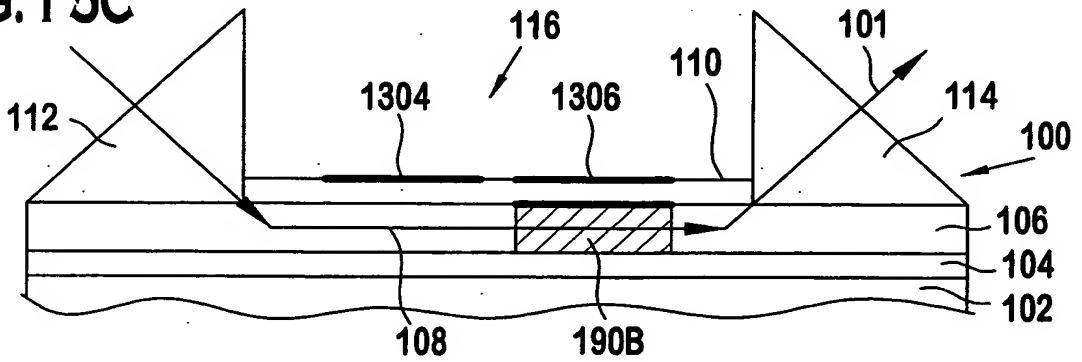
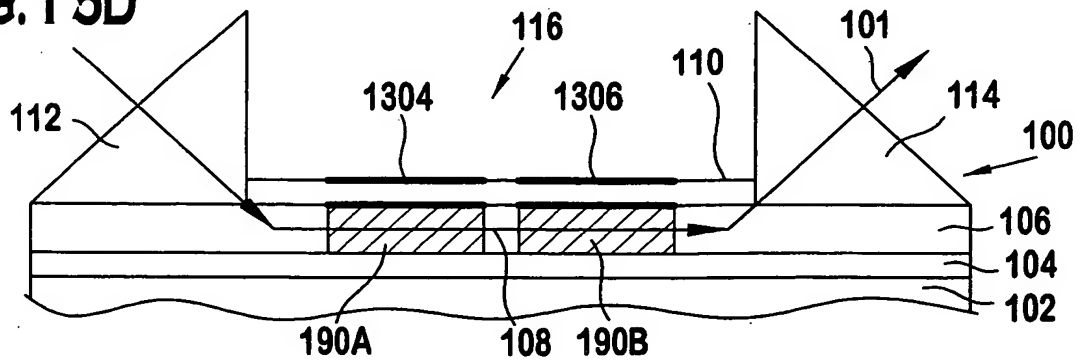


FIG. 15D



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FIG. 16

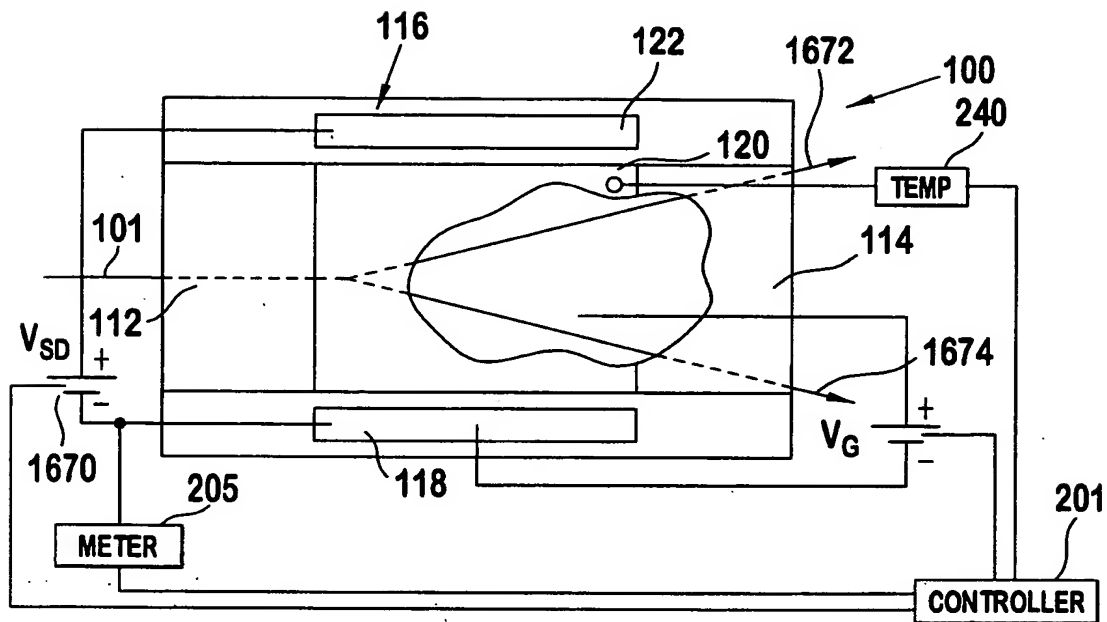
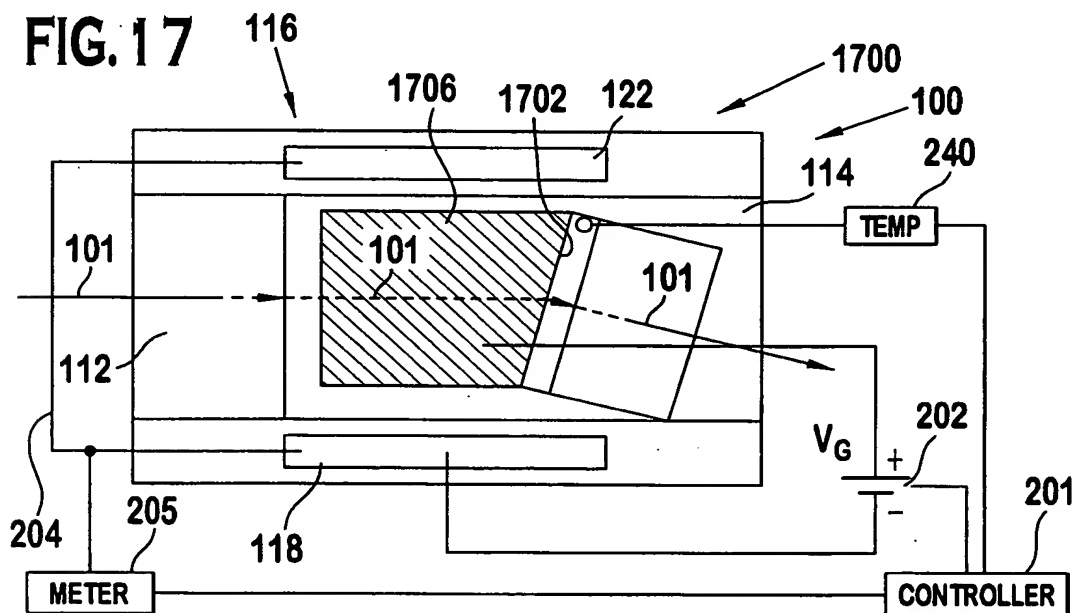
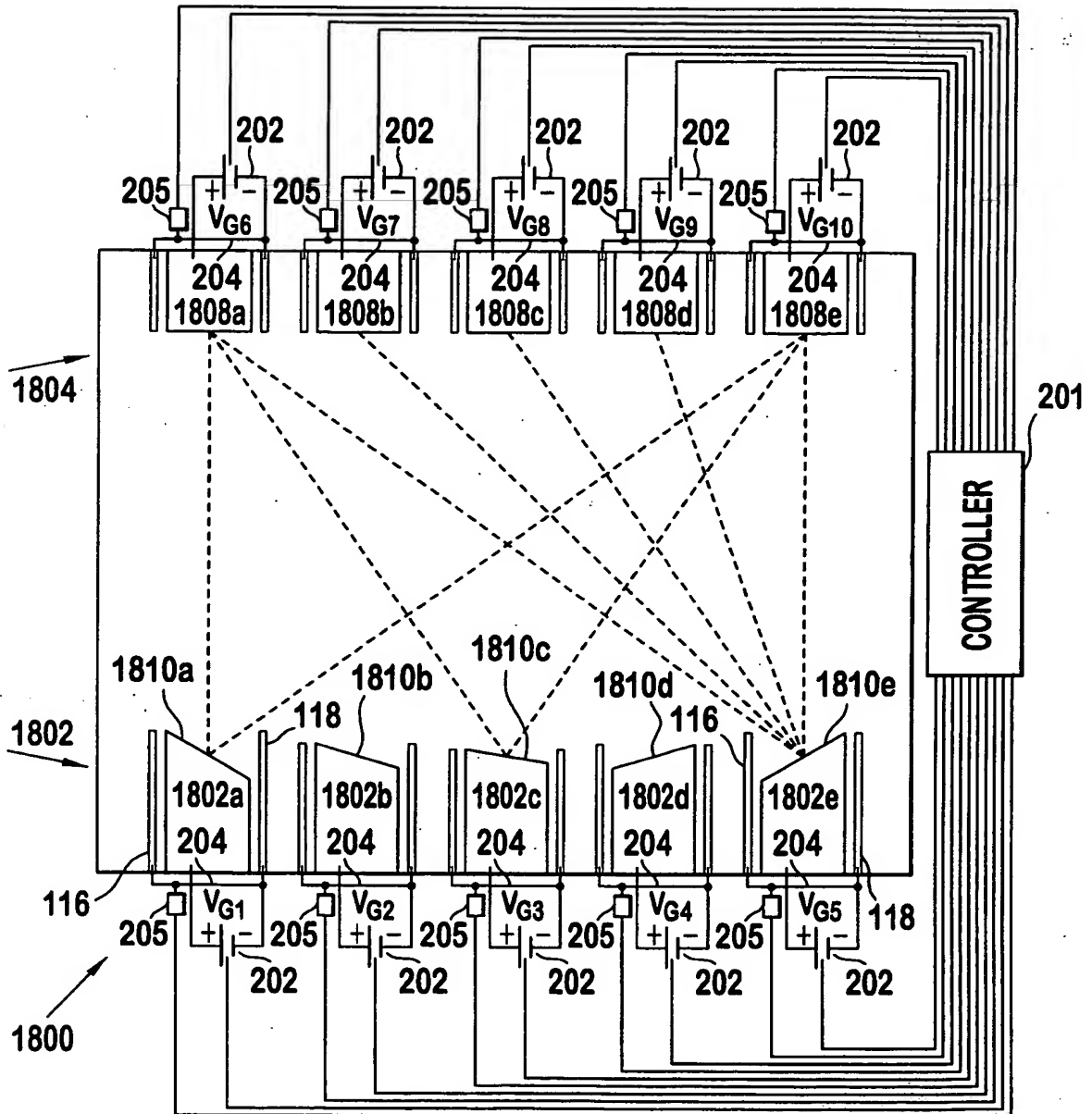


FIG. 17



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FIG. 18



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FIG. 19

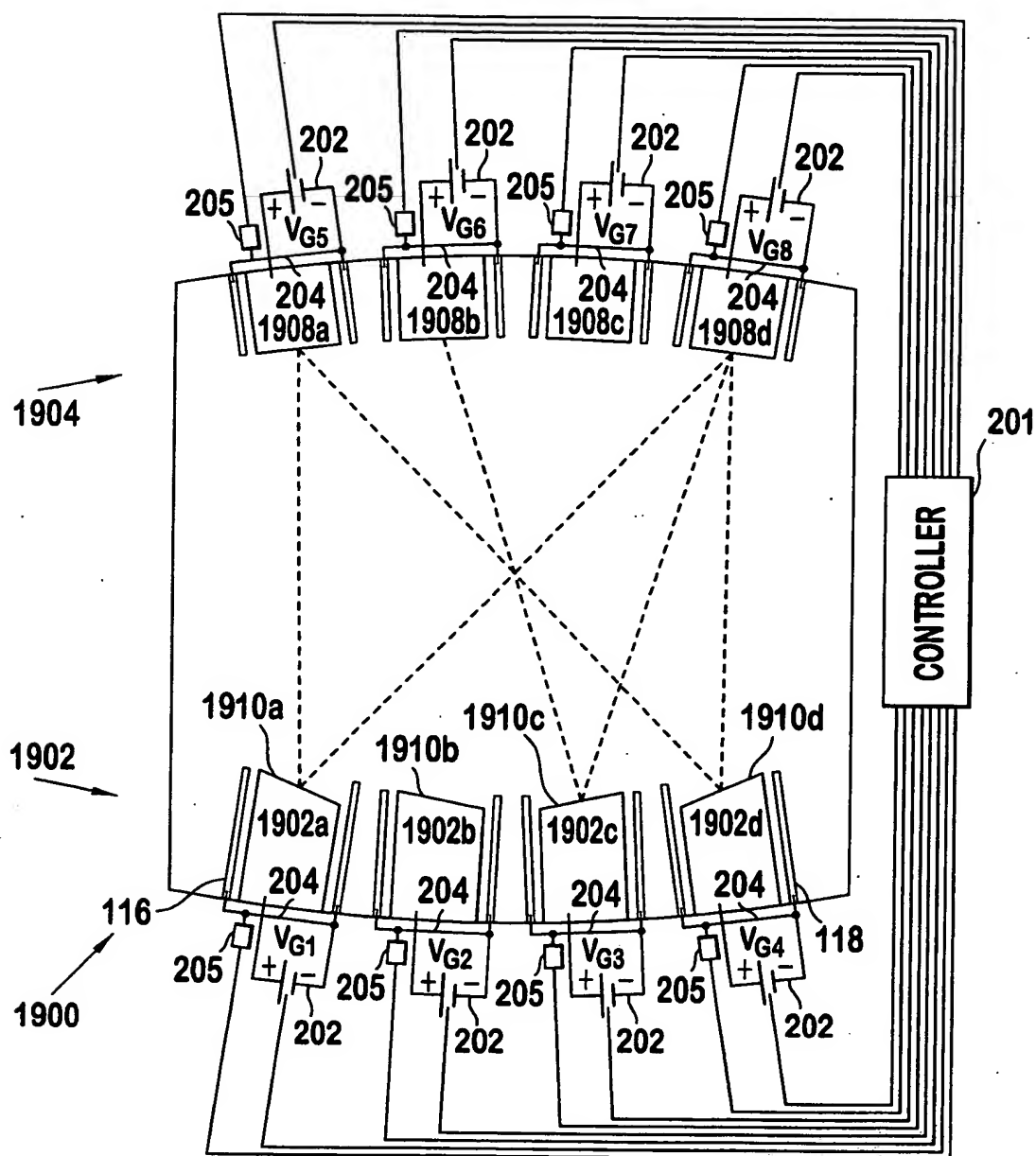
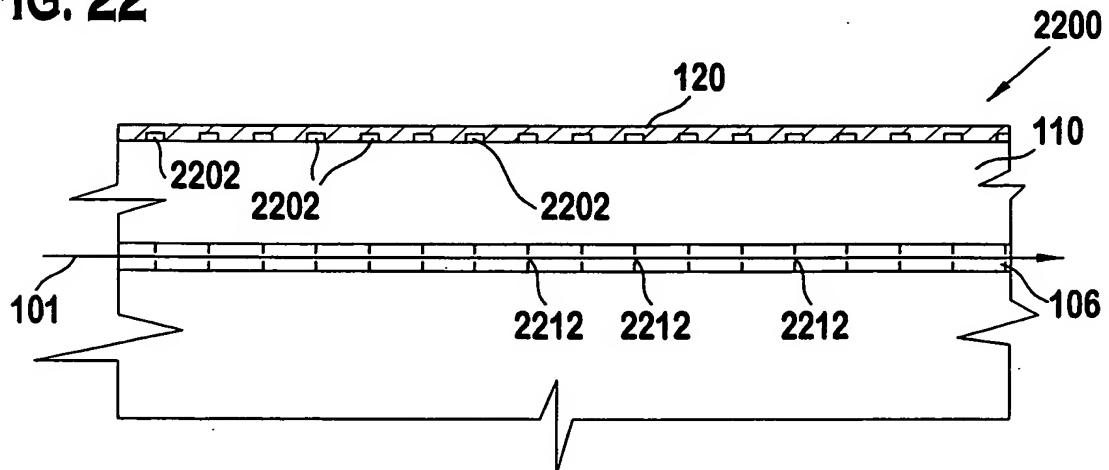


FIG. 20



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FIG. 23

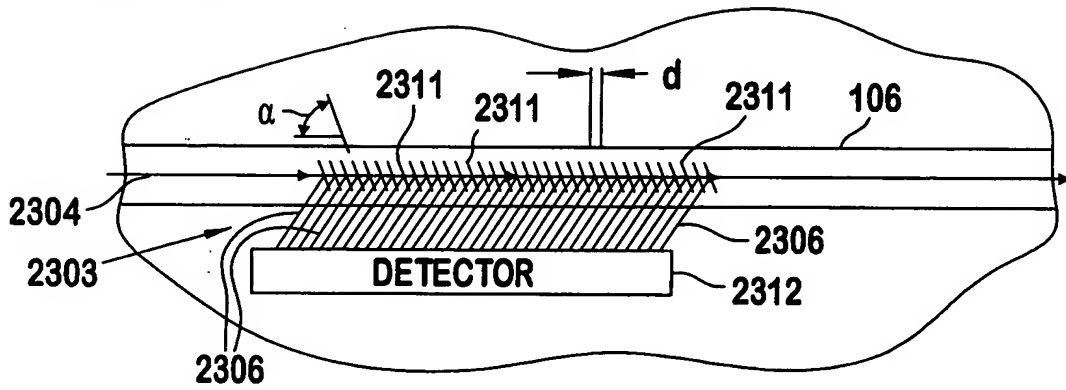
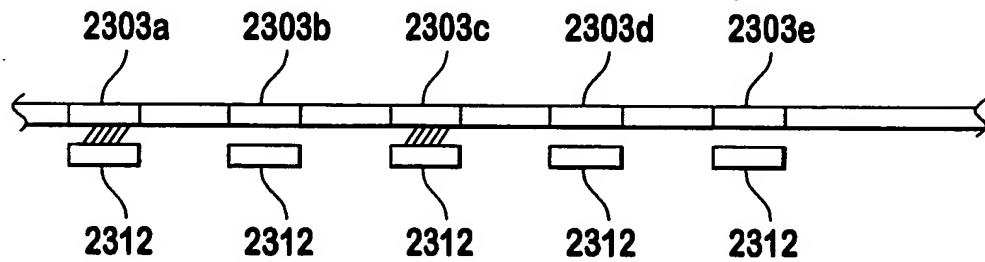


FIG. 24



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FIG. 25

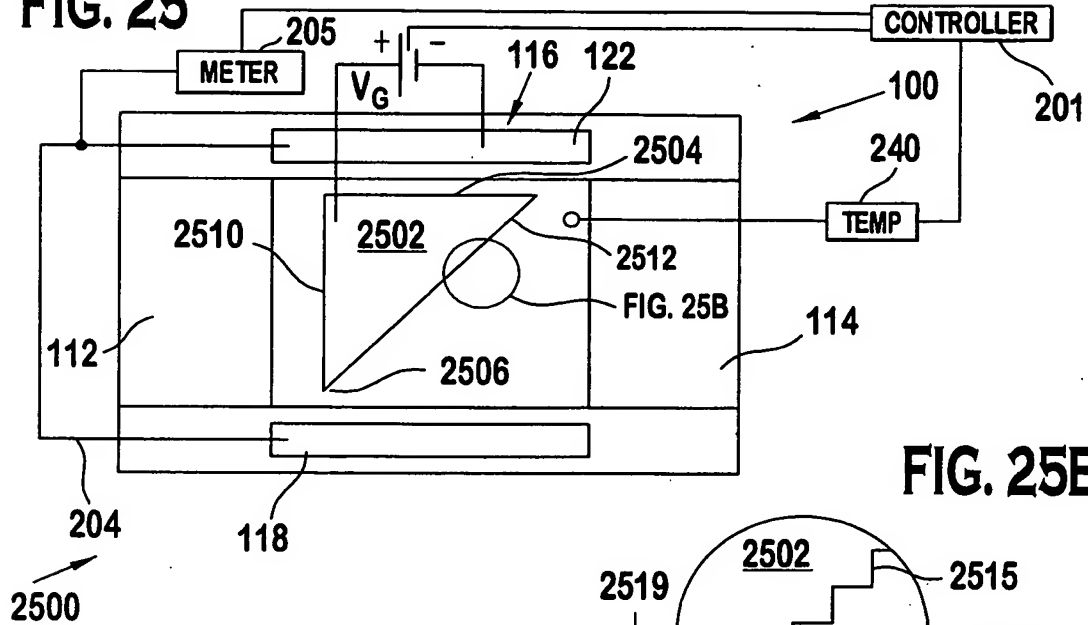


FIG. 25B

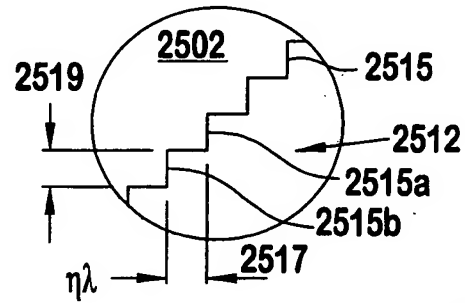
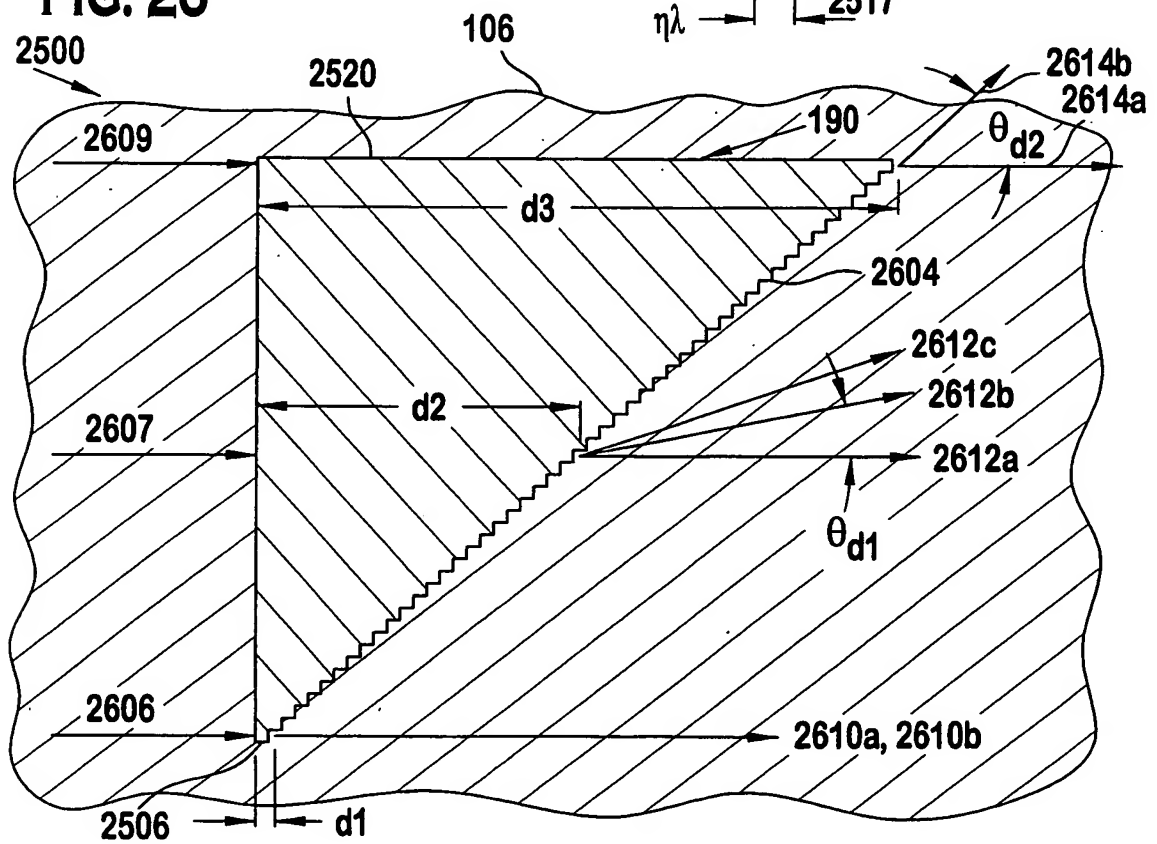


FIG. 26



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FIG. 27

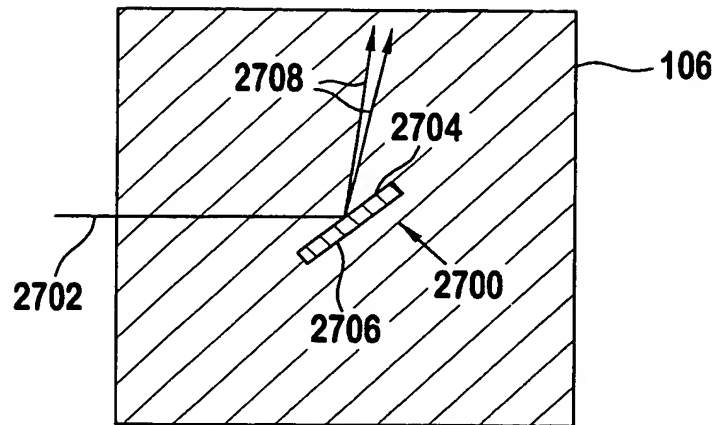


FIG. 28

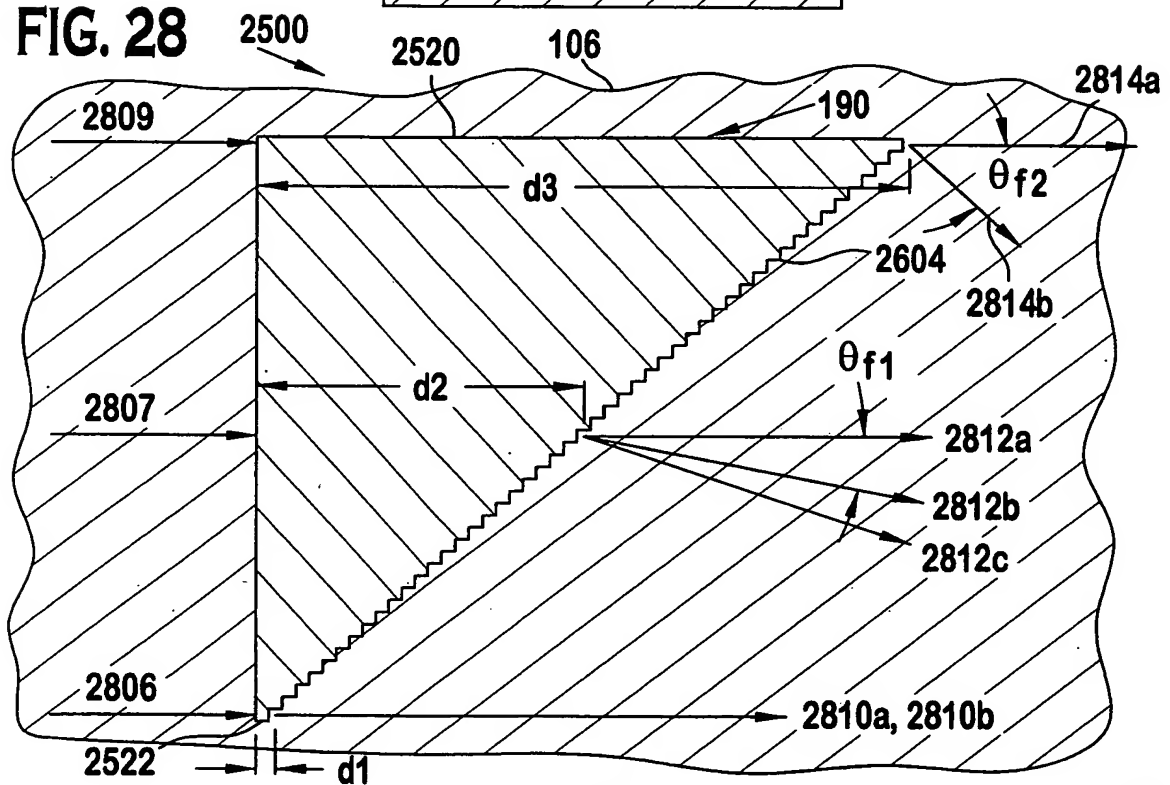
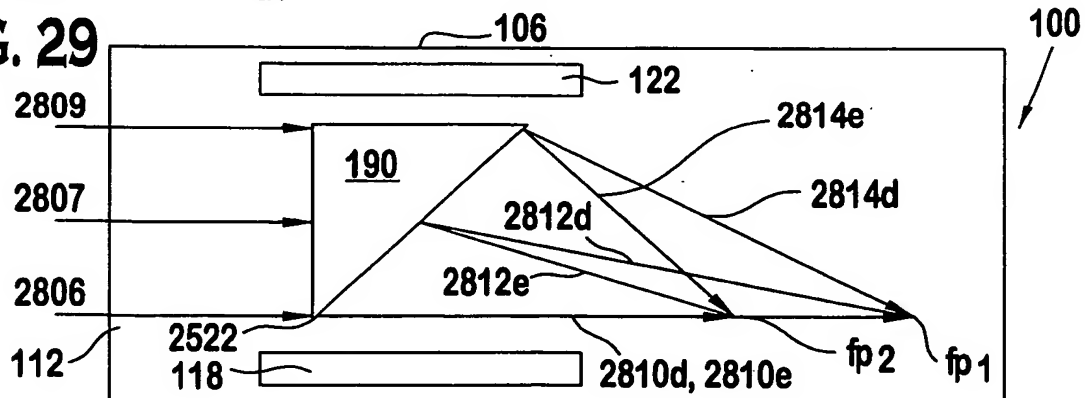
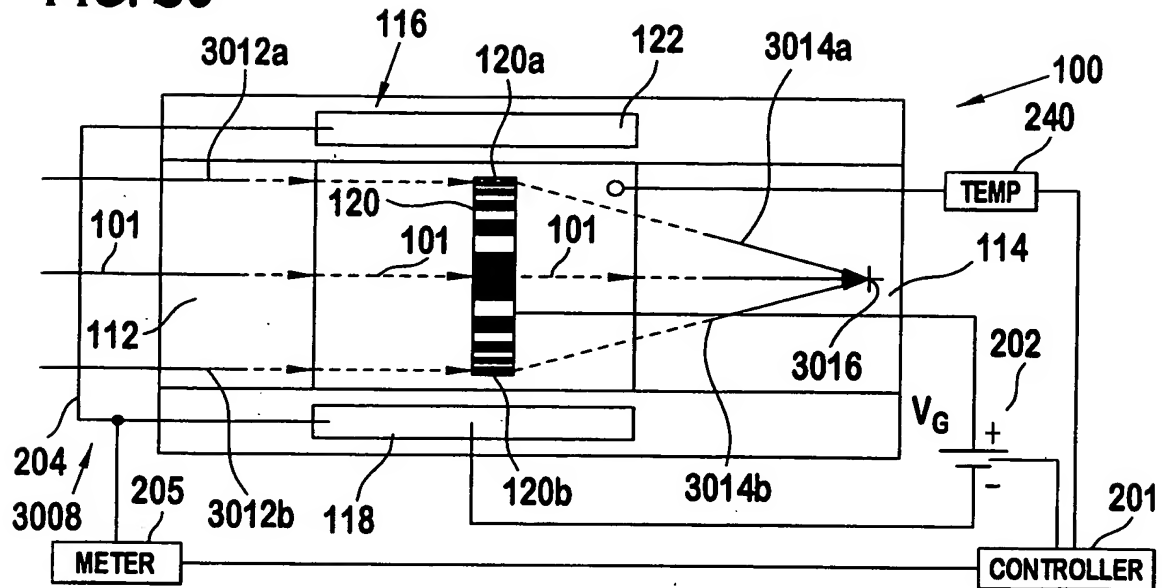
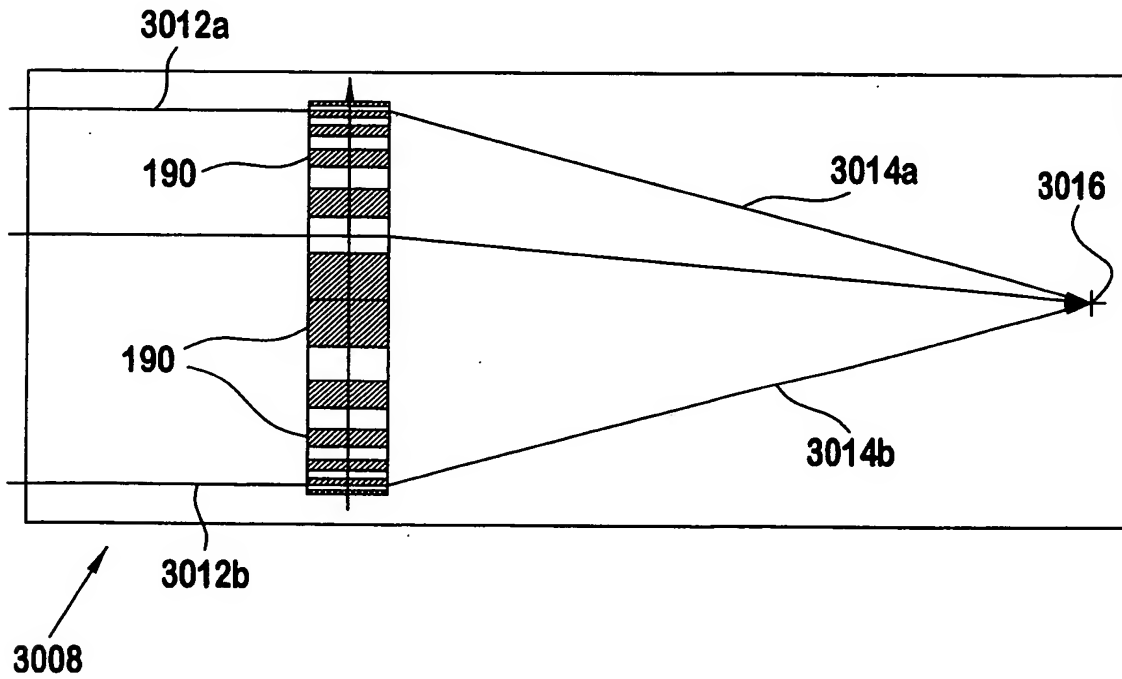


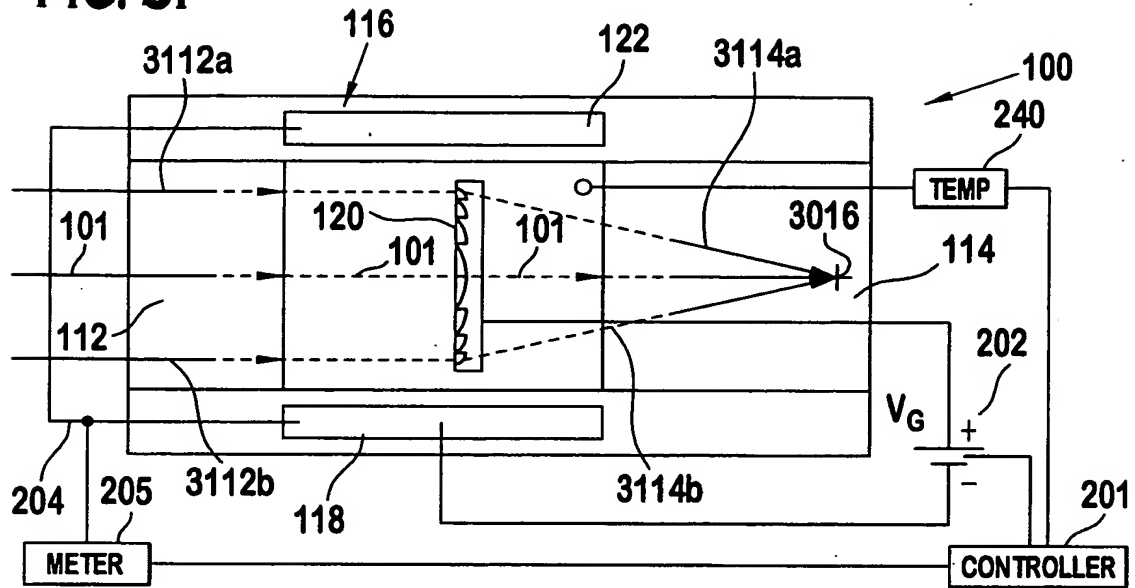
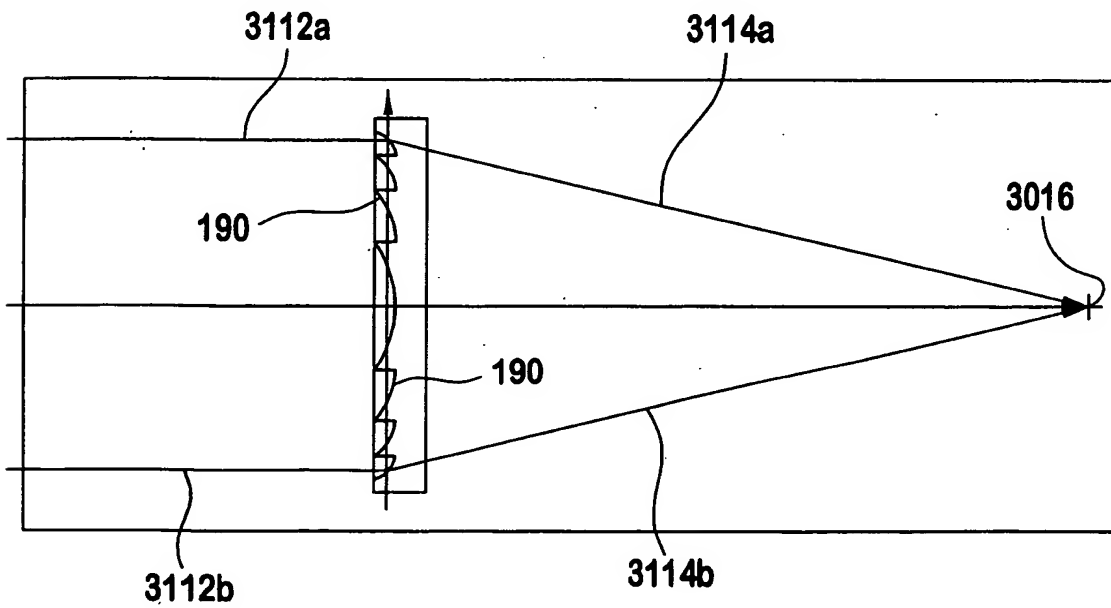
FIG. 29



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FIG. 30**FIG. 30A**

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FIG. 31**FIG. 31 A**

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FIG. 32

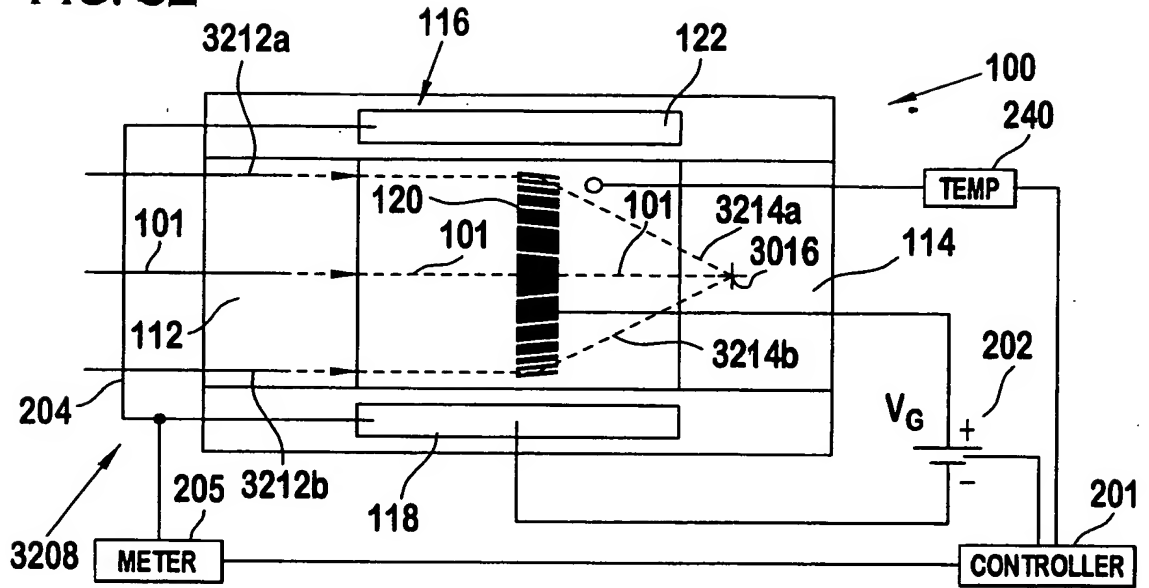
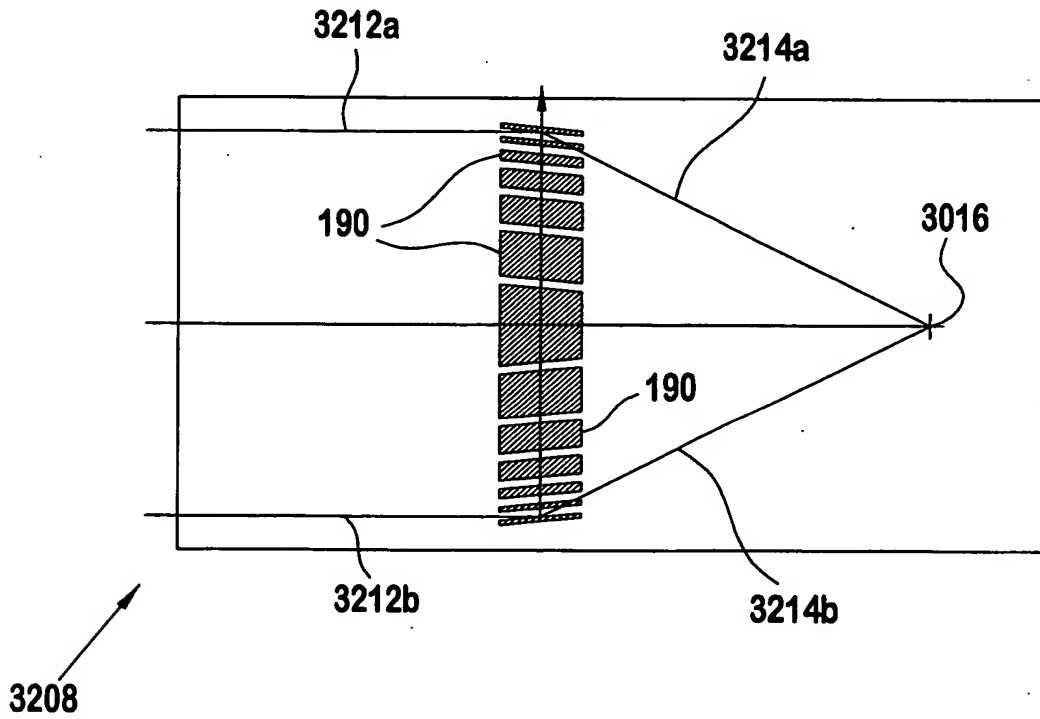


FIG. 32A



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FIG. 33

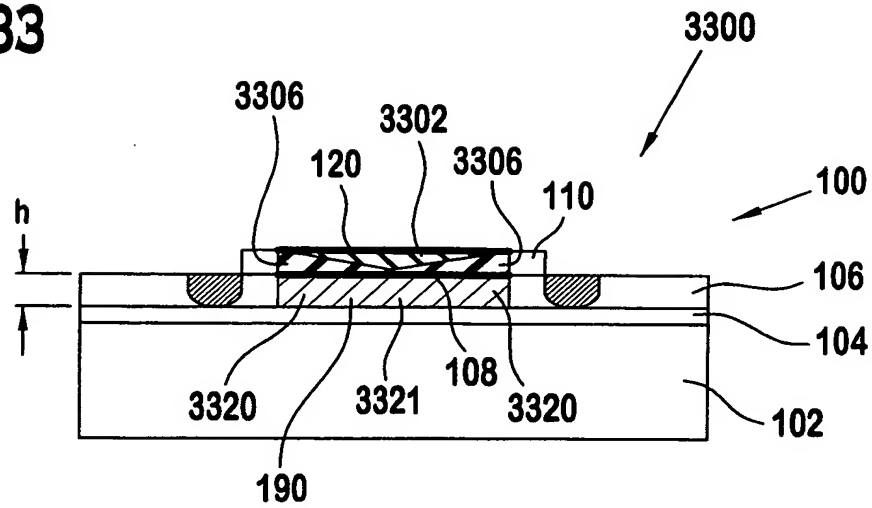
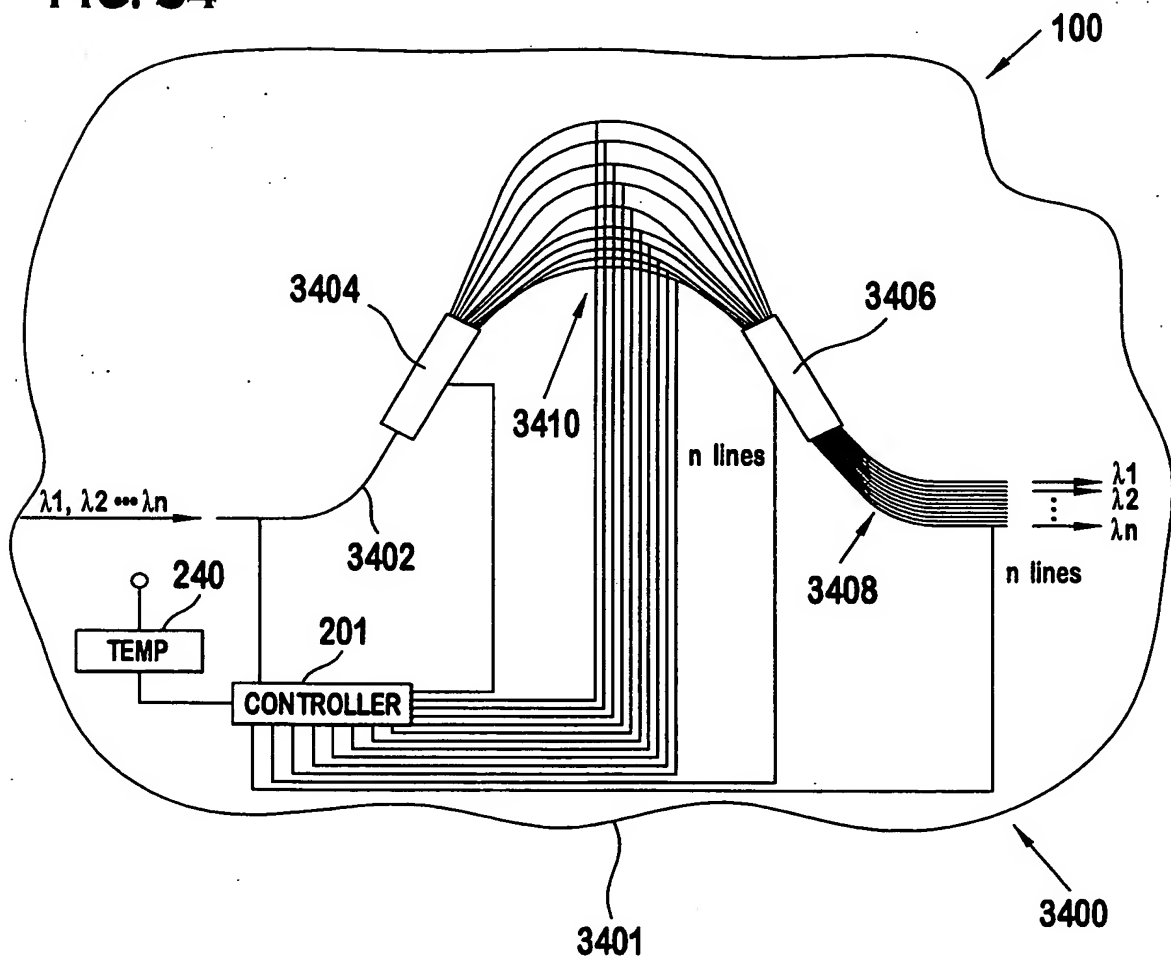


FIG. 34



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FIG. 35

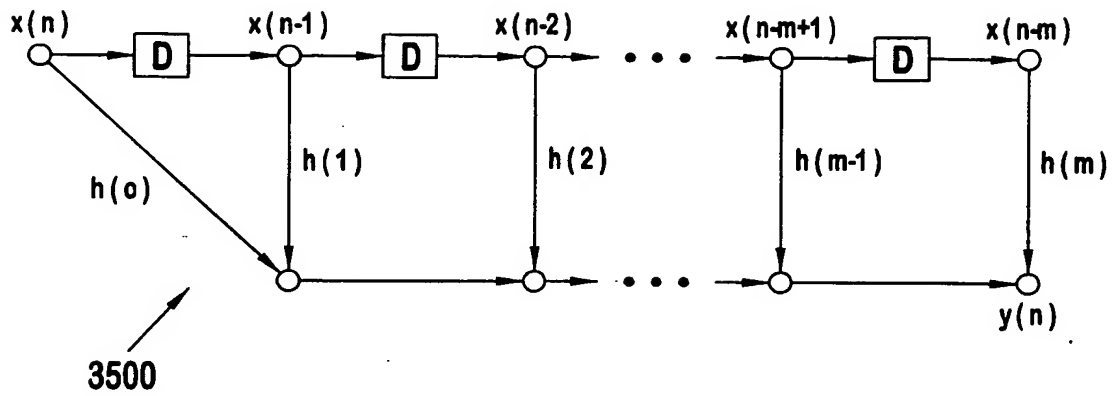
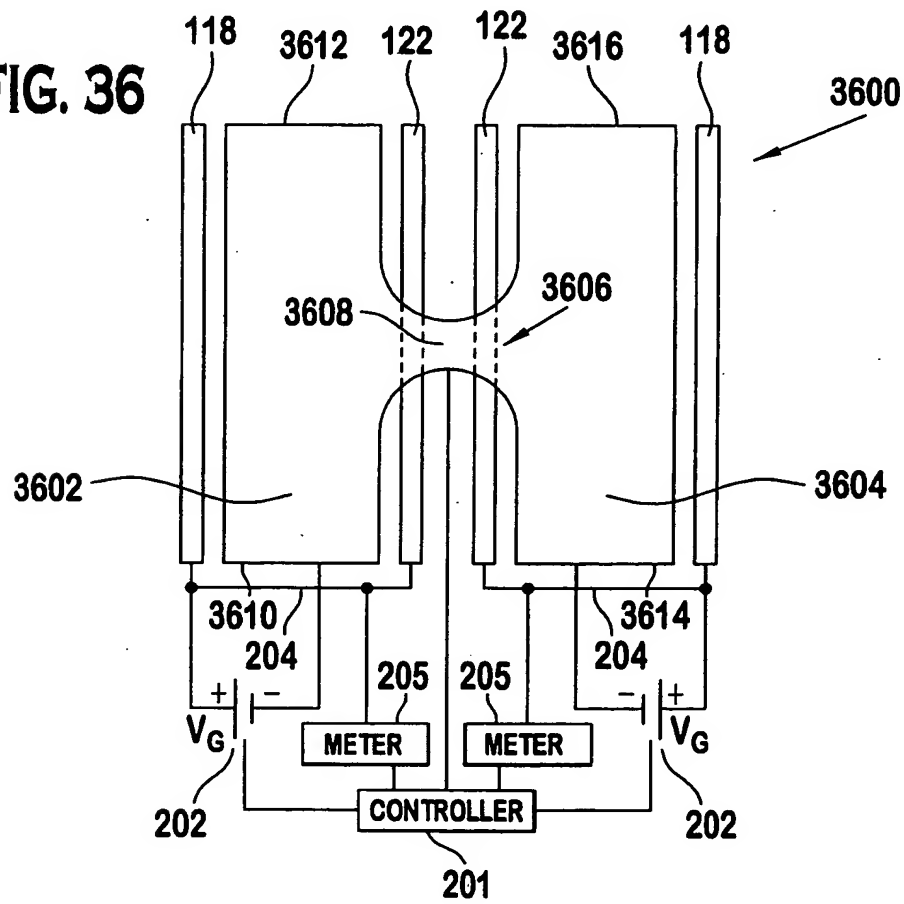


FIG. 36



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FIG. 37

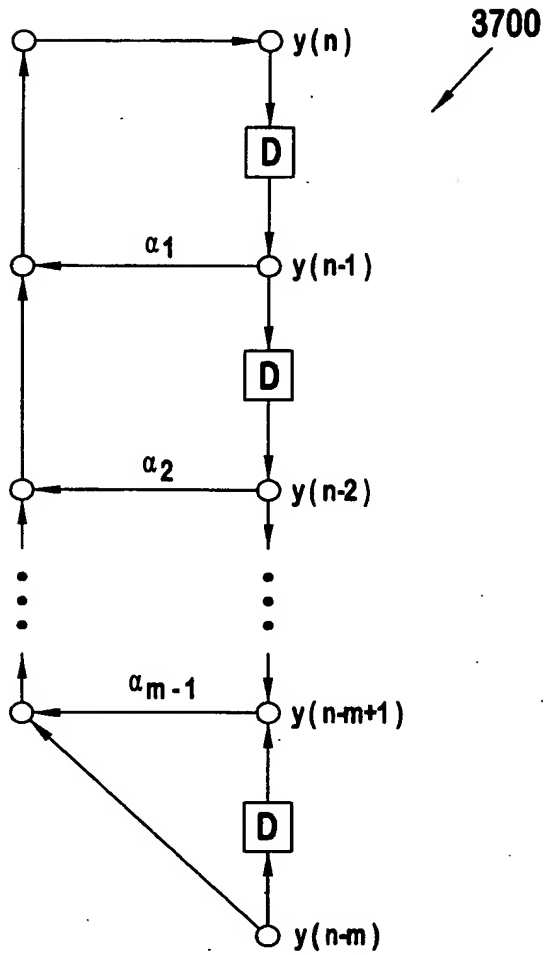
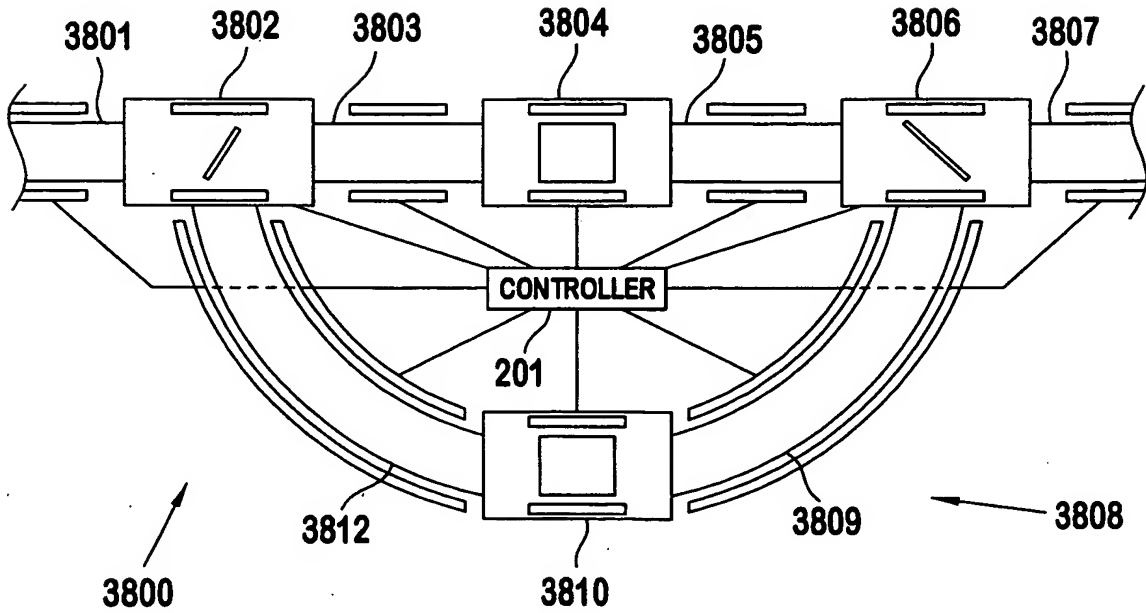
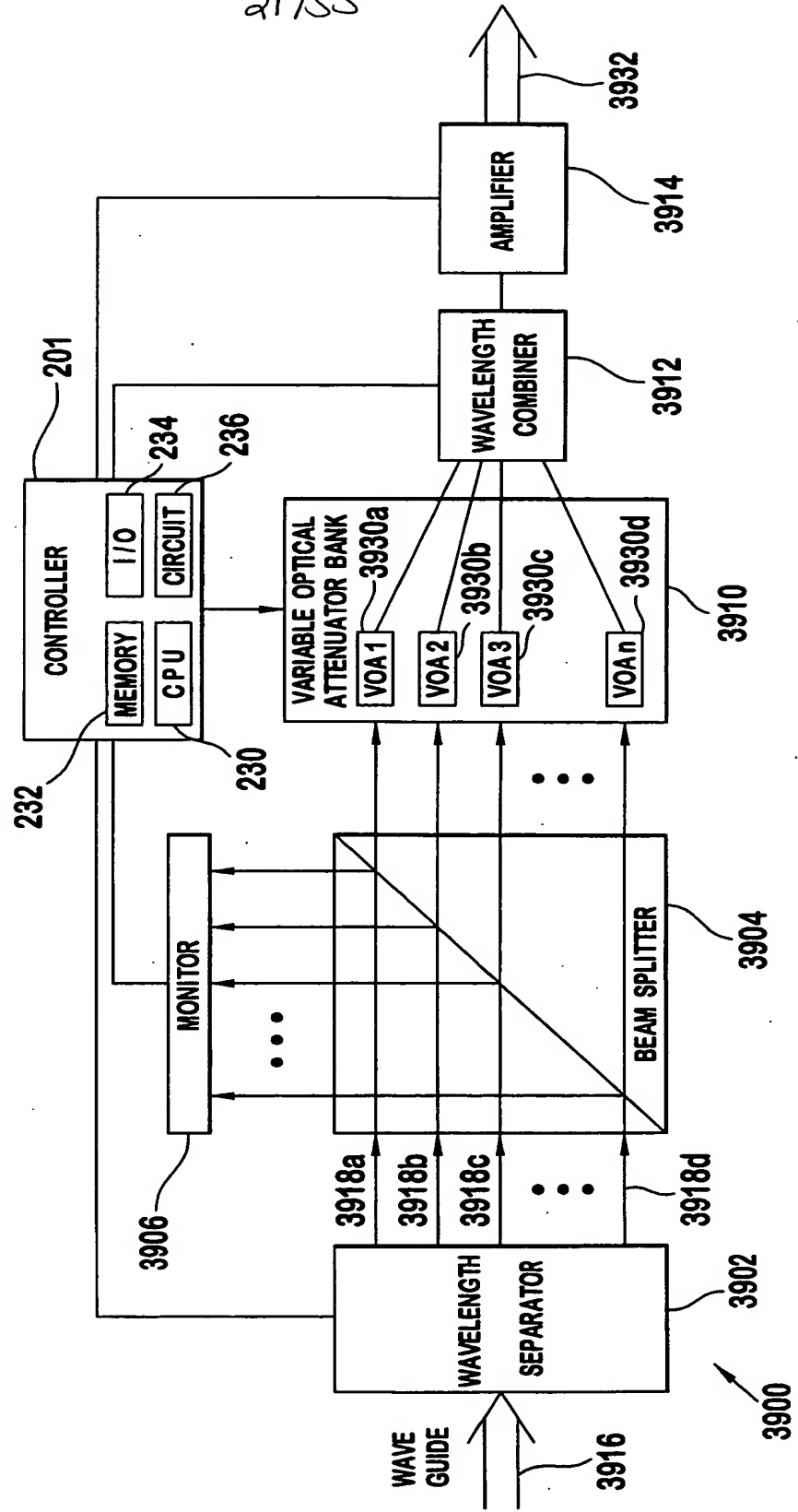


FIG. 38



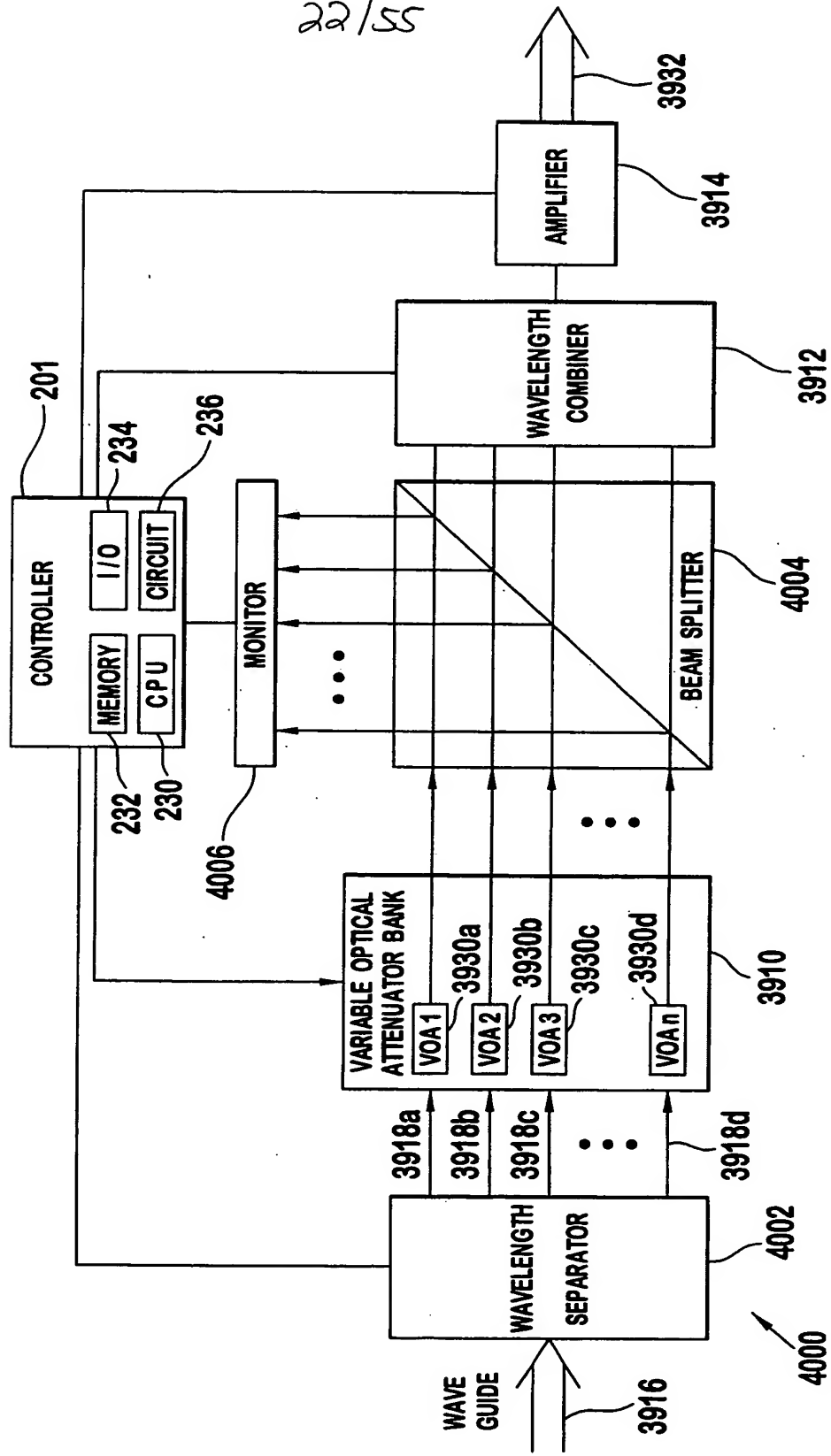
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FIG. 39

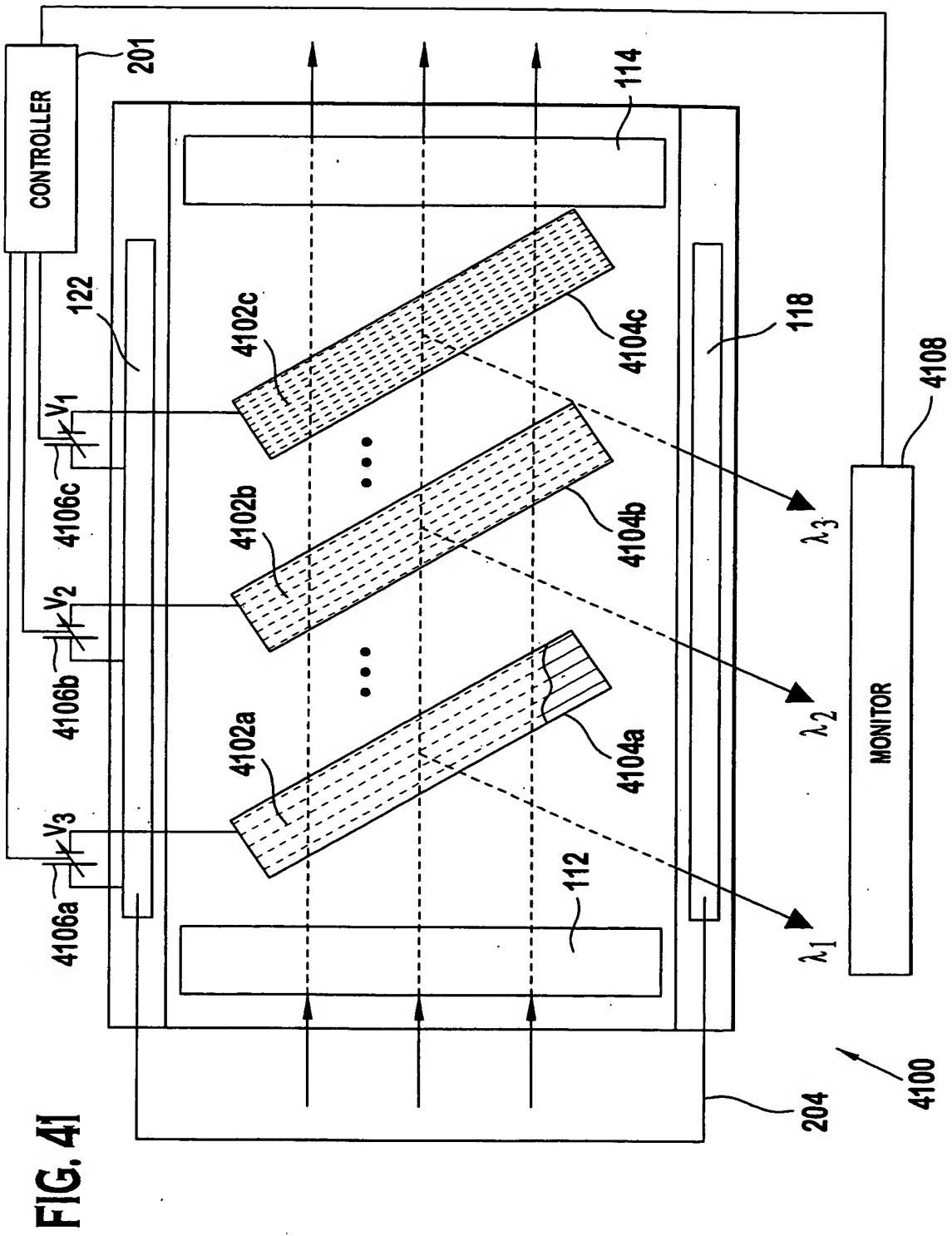


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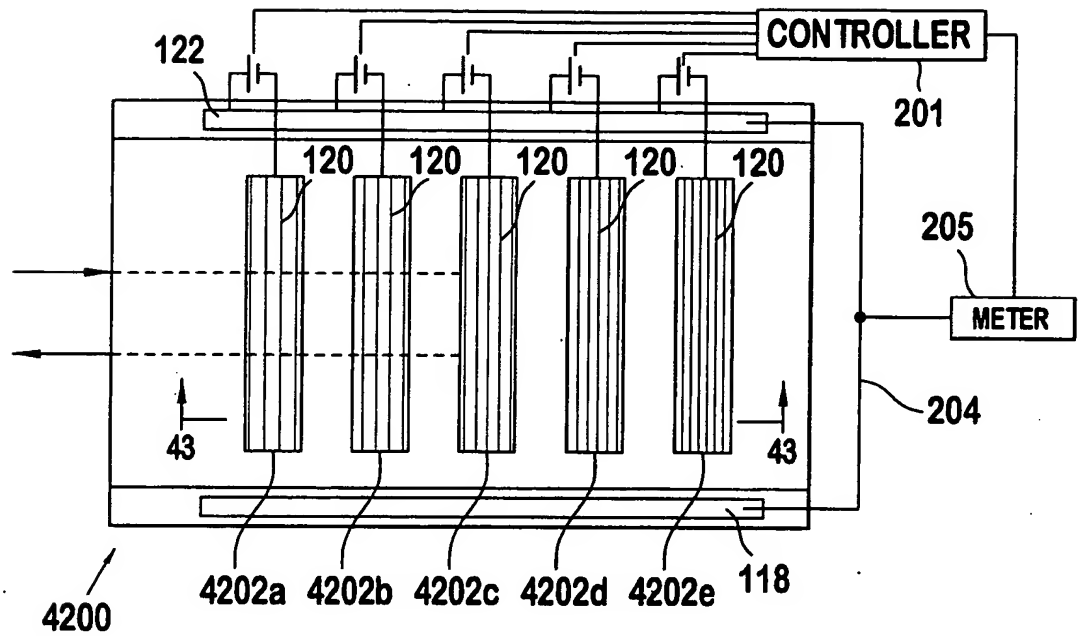
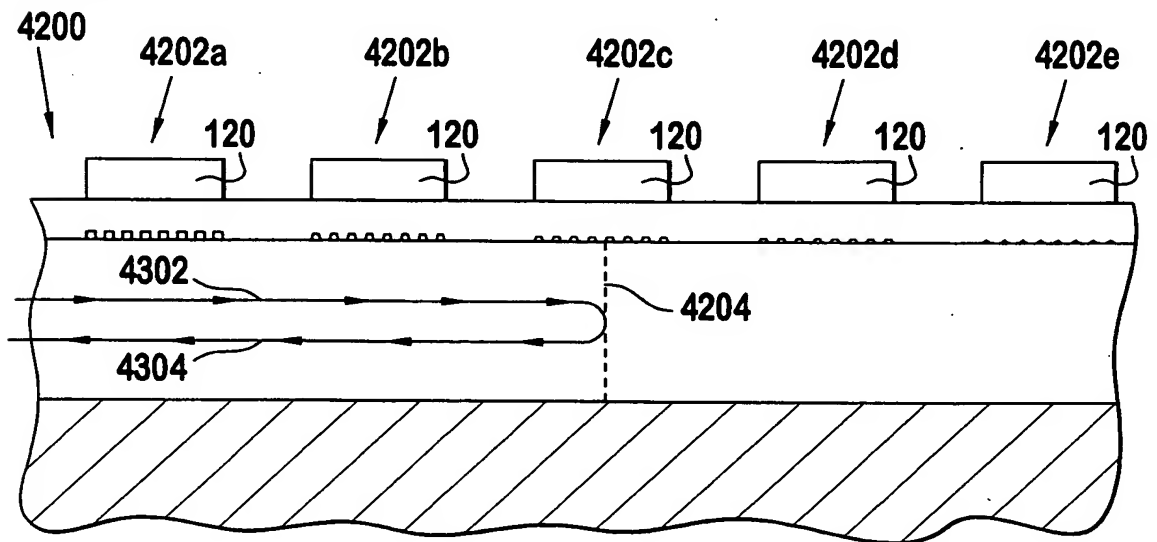
FIG. 40



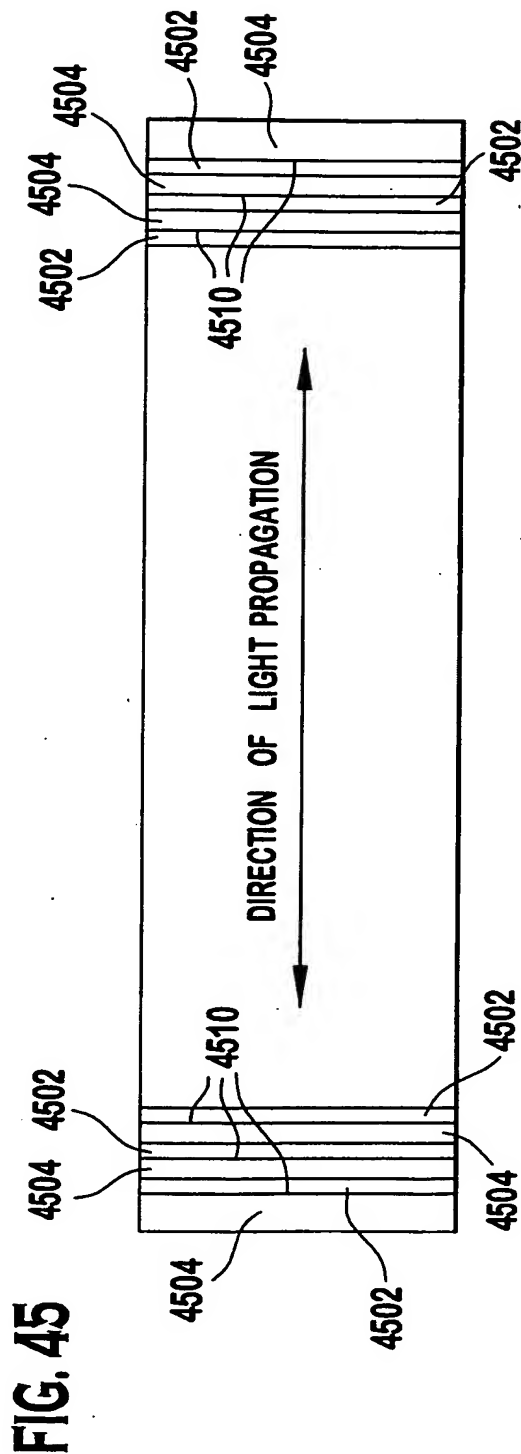
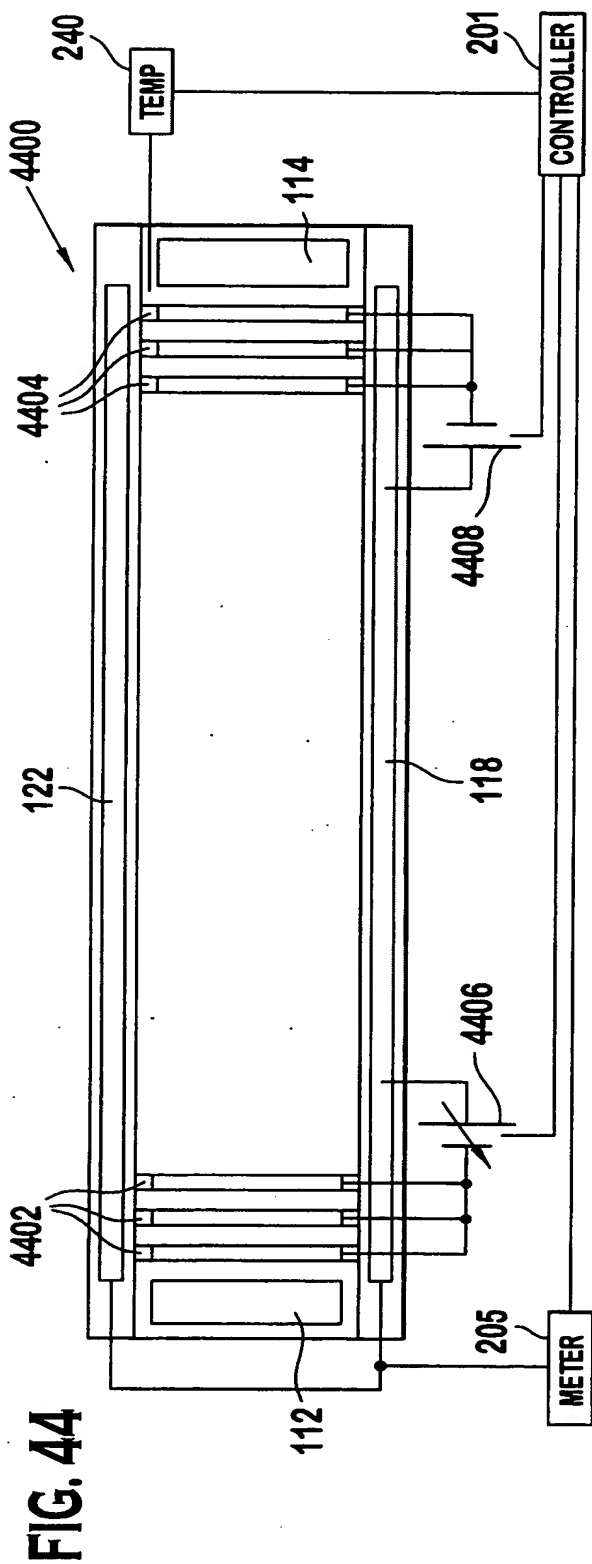
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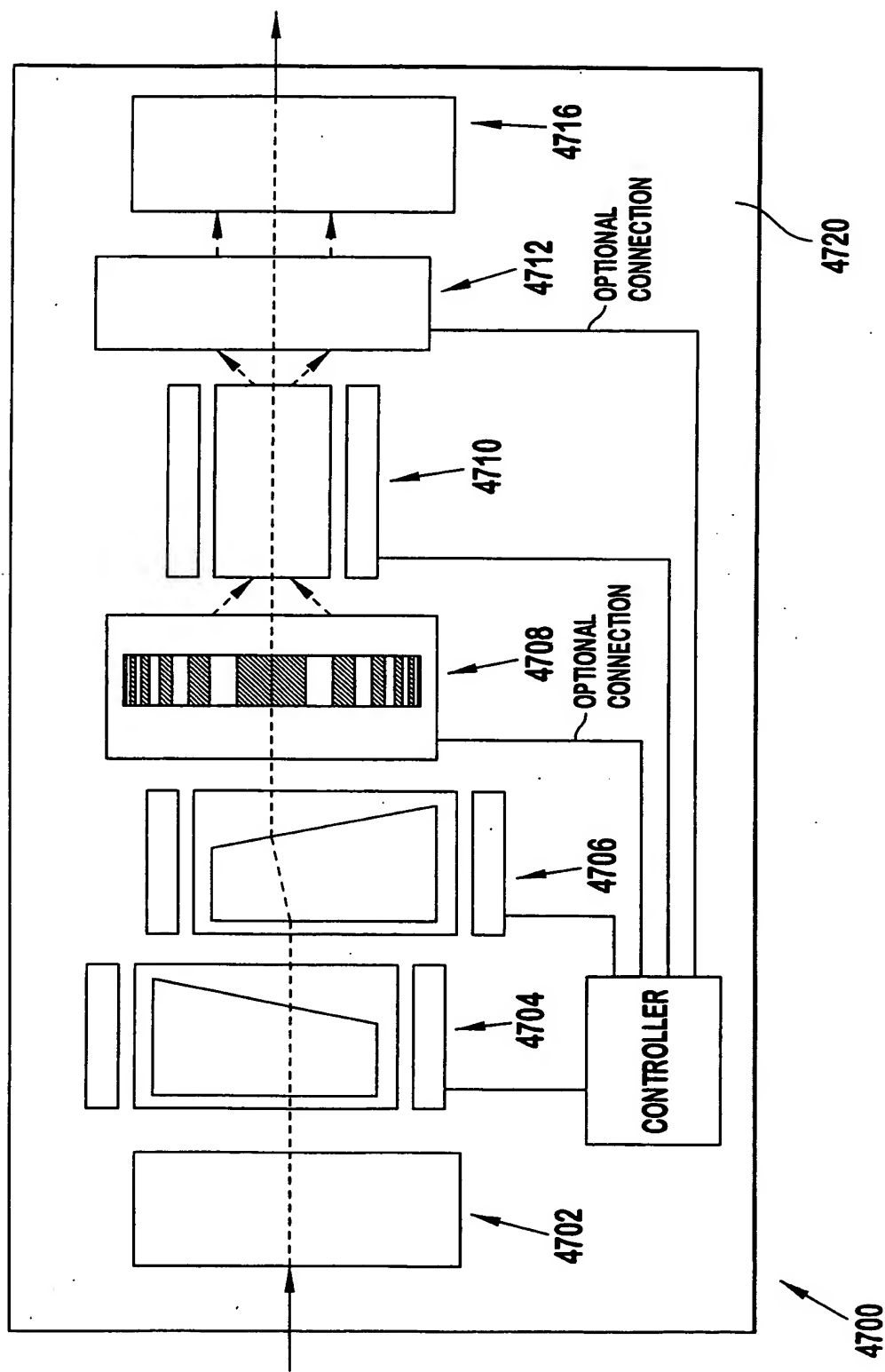
FIG. 42**FIG. 43**

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FIG. 47



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FIG. 48

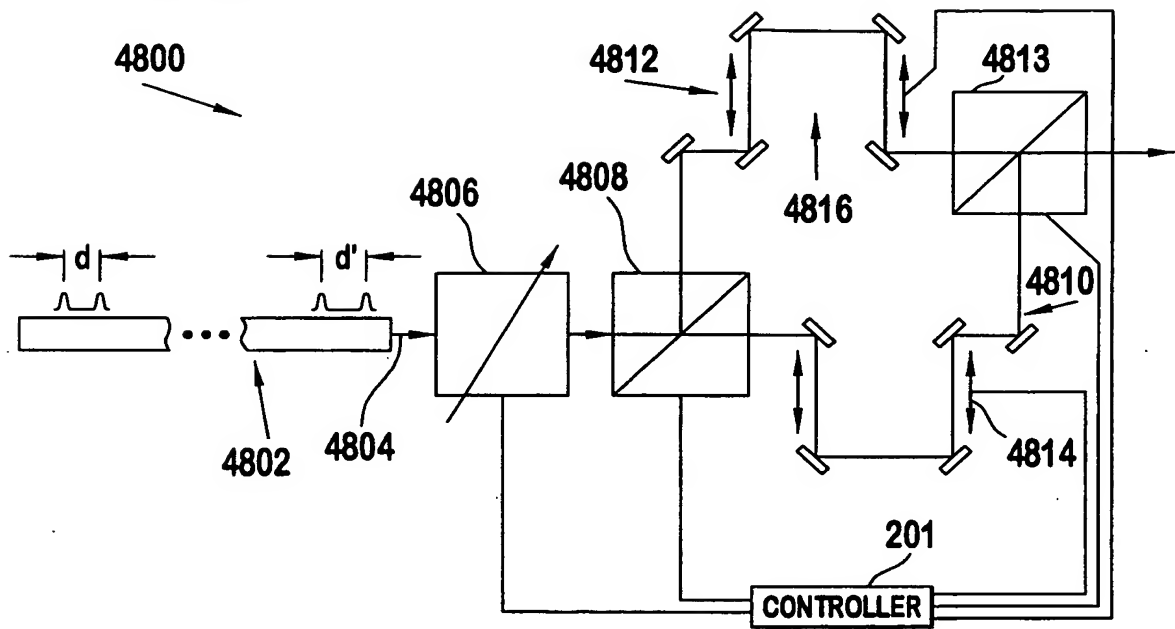
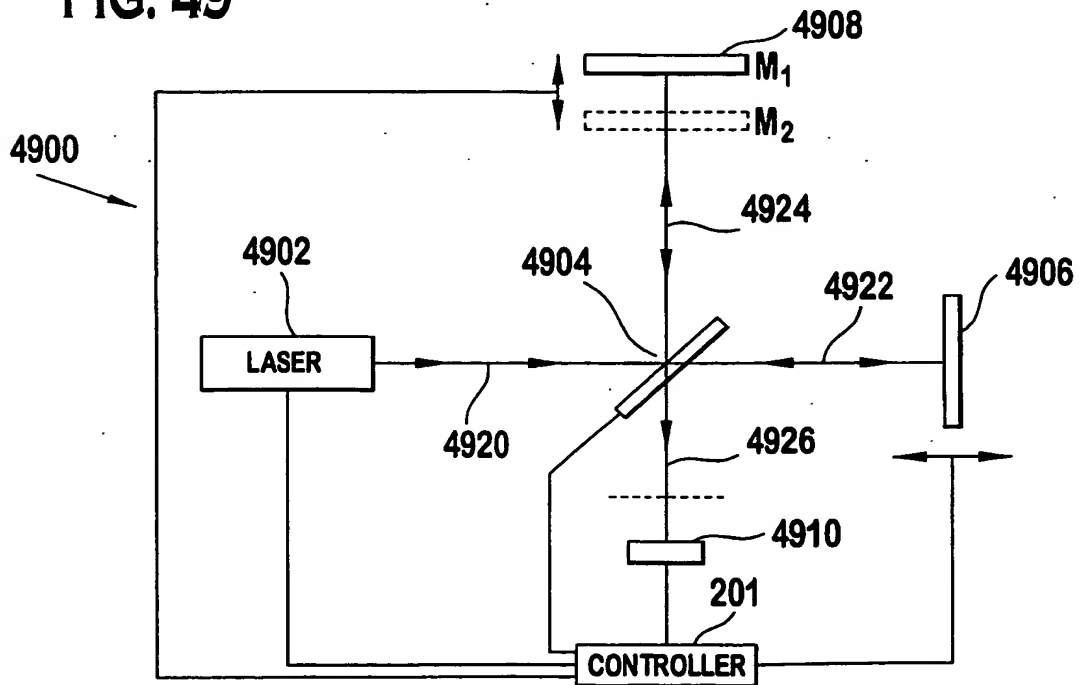
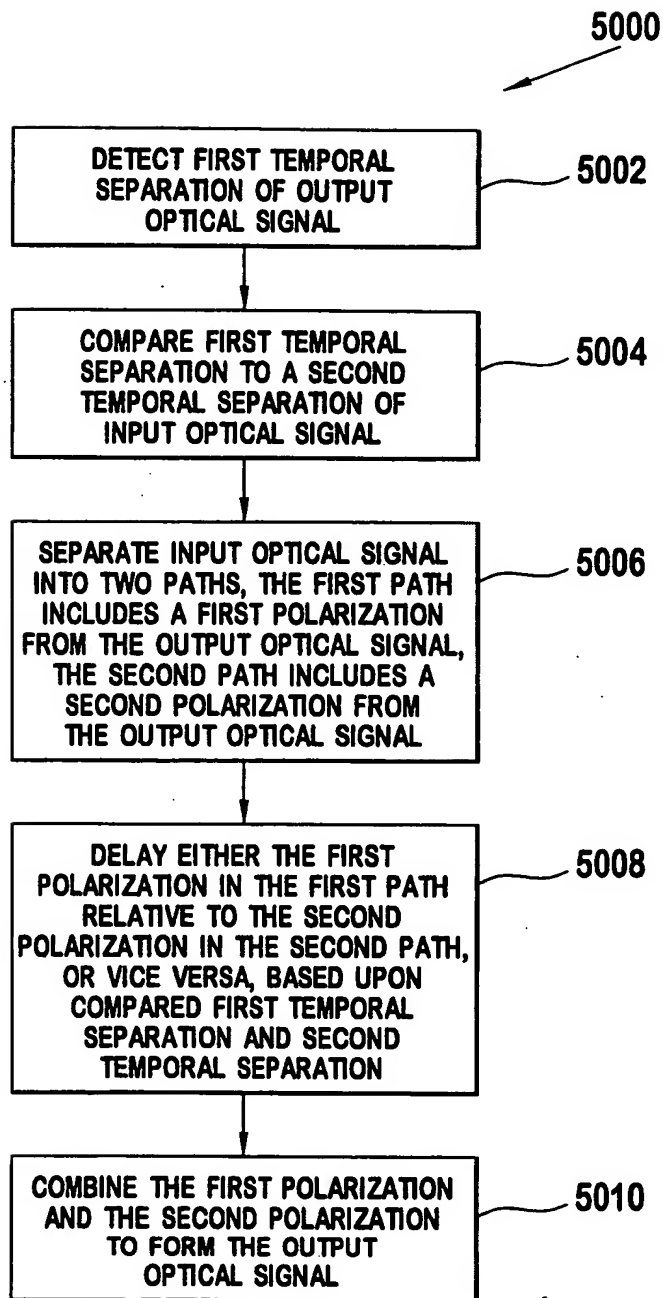


FIG. 49



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FIG. 50



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FIG. 51

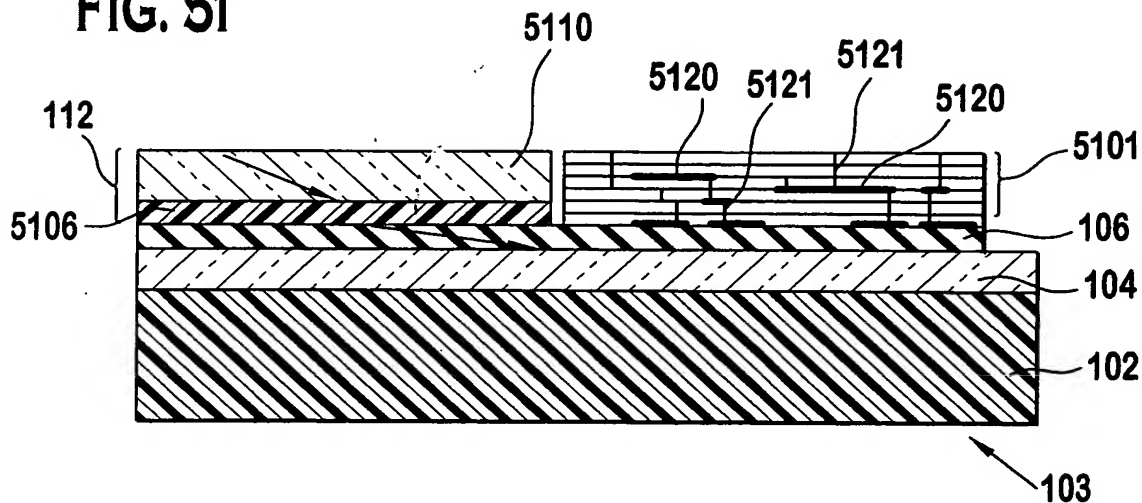
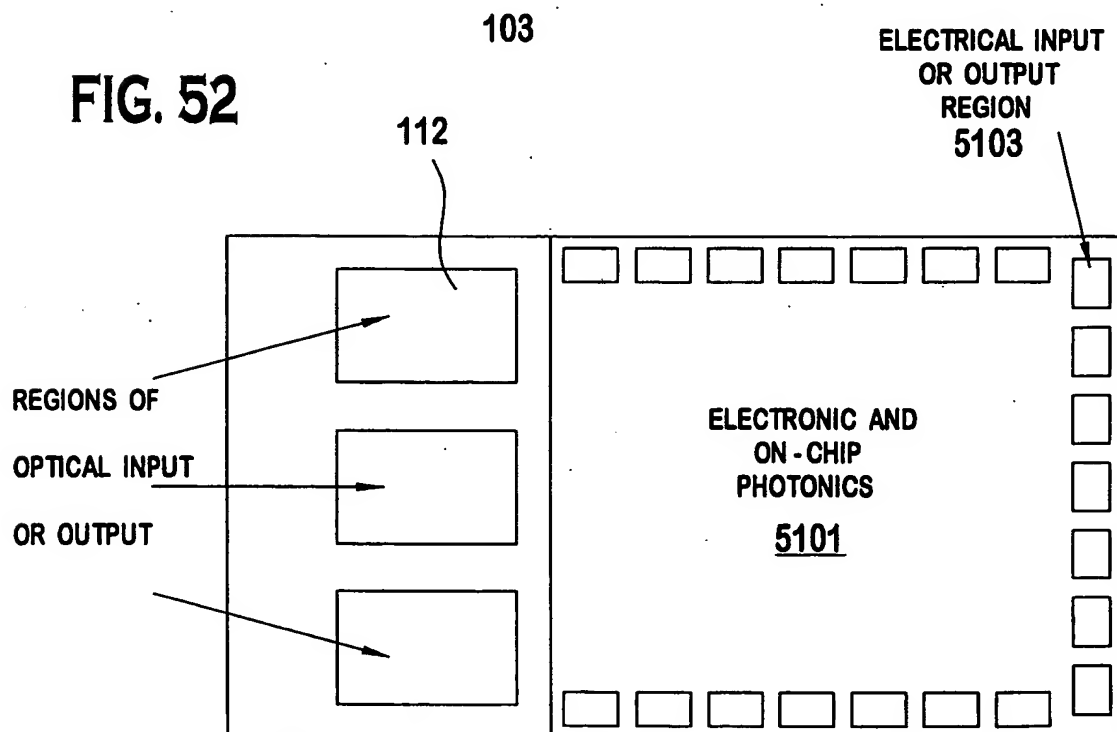
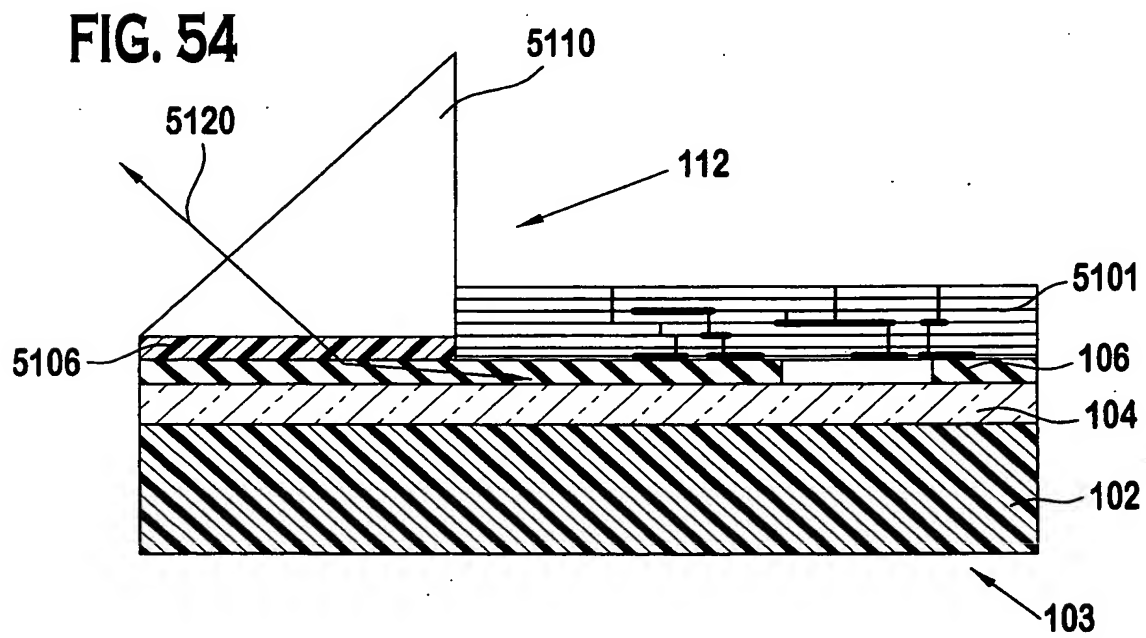
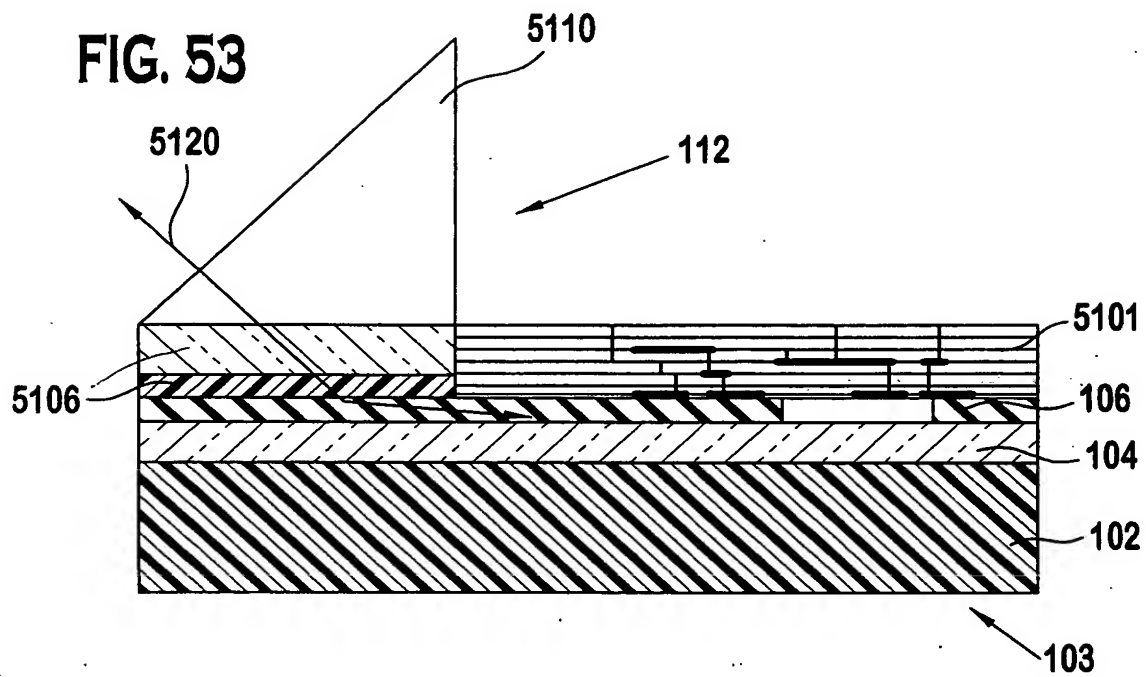


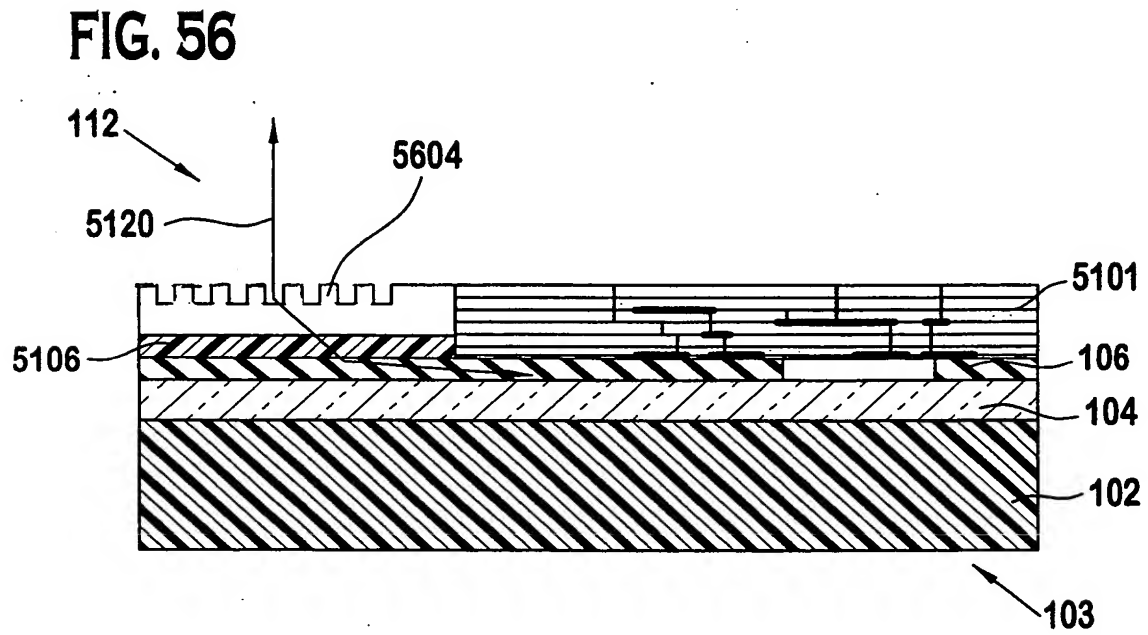
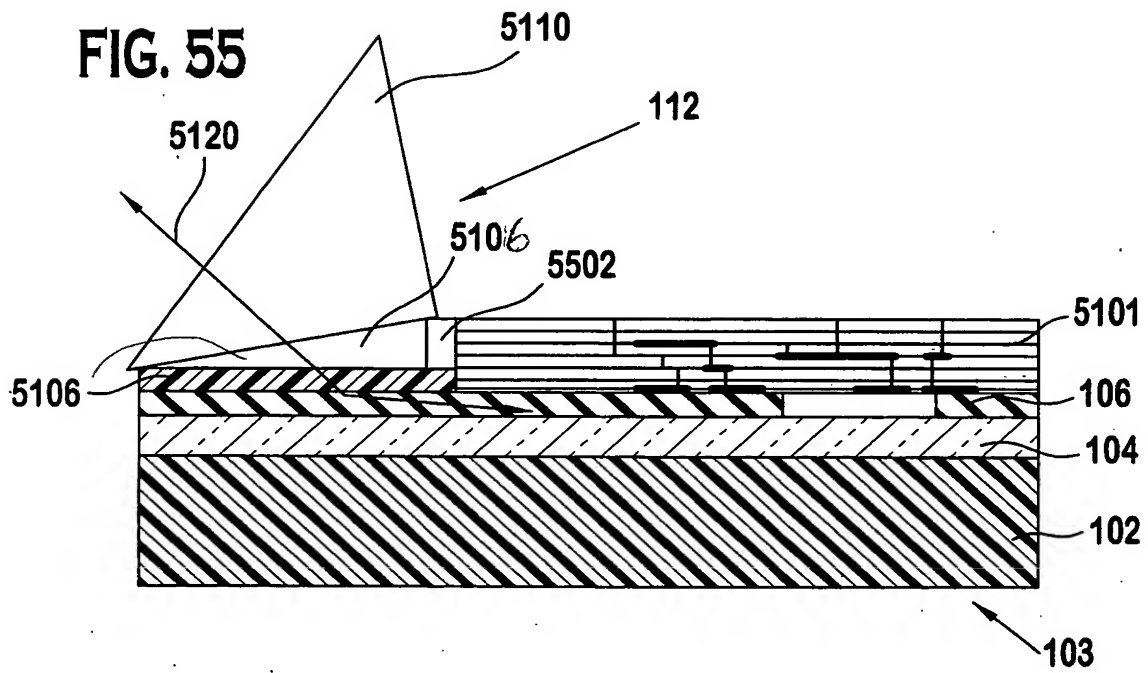
FIG. 52



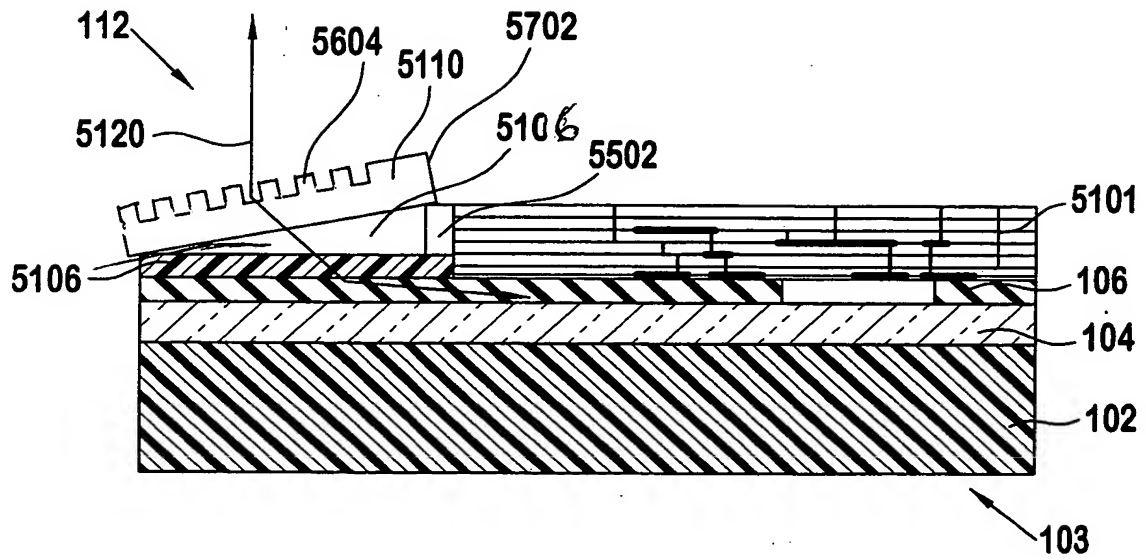
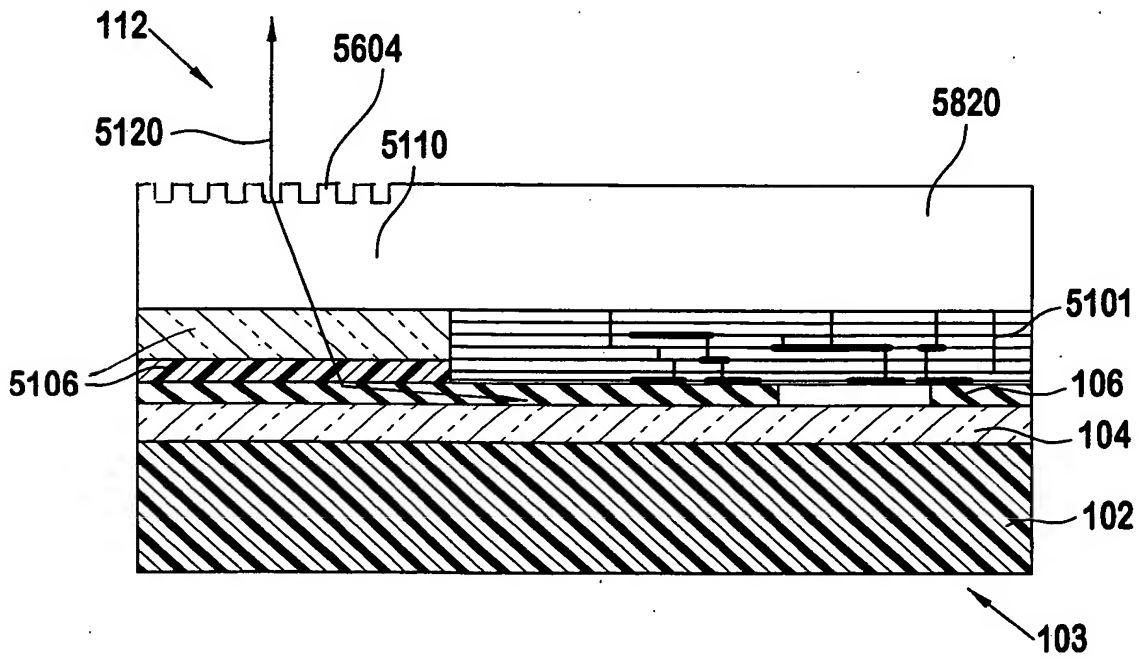
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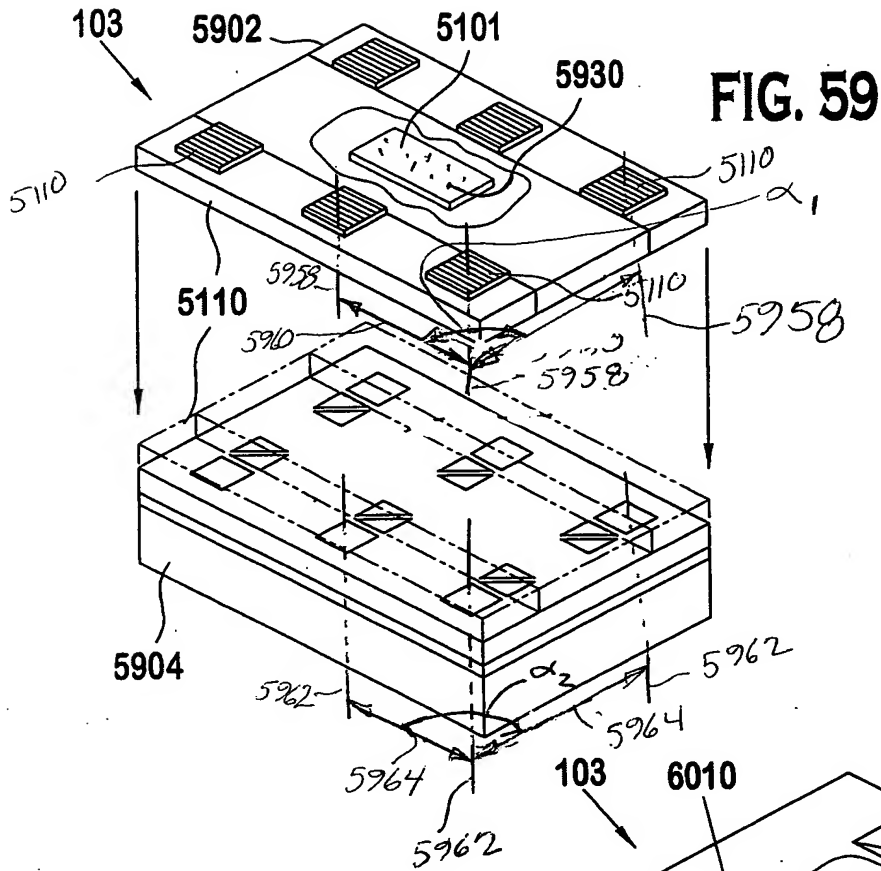
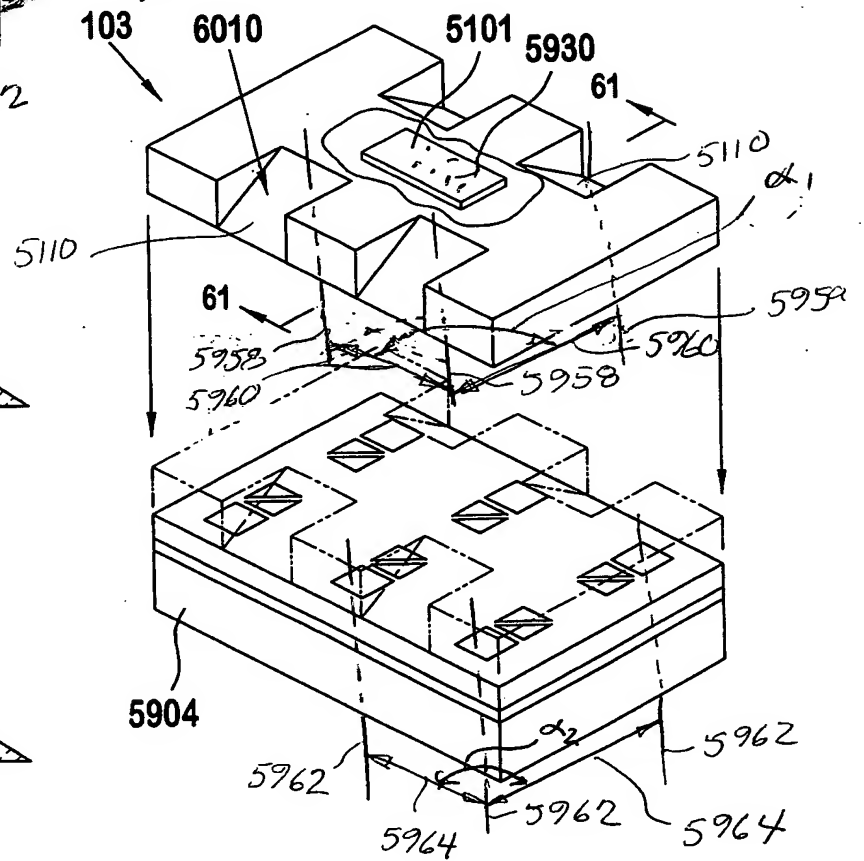
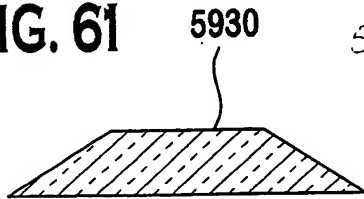
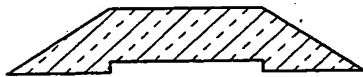
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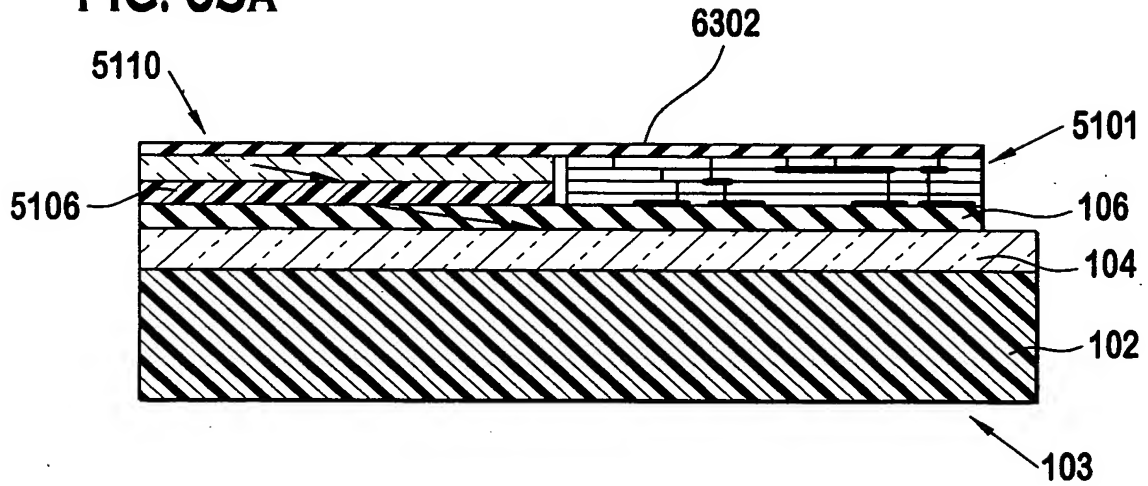
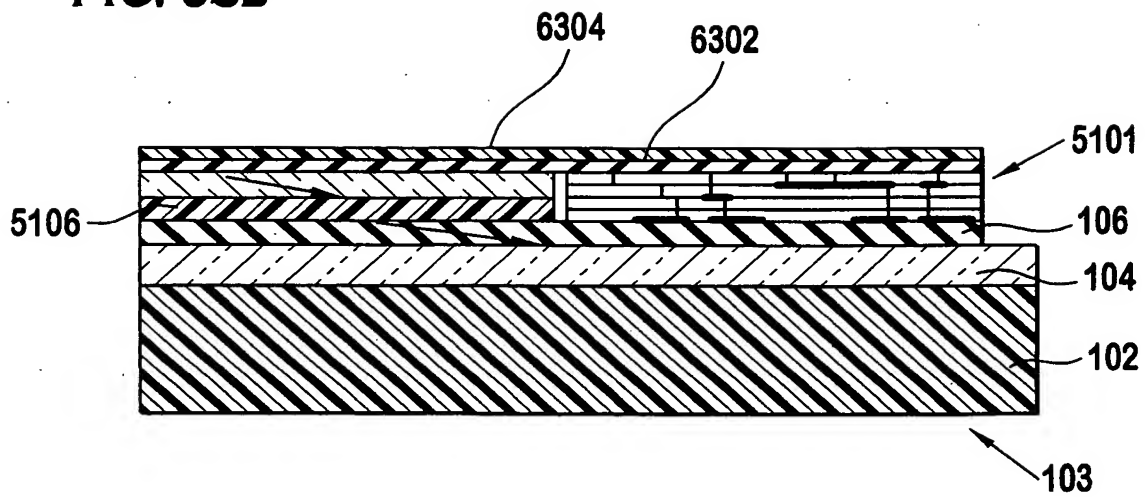
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FIG. 57**FIG. 58**

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**FIG. 60****FIG. 61****FIG. 62**

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FIG. 63A**FIG. 63B**

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FIG. 63c

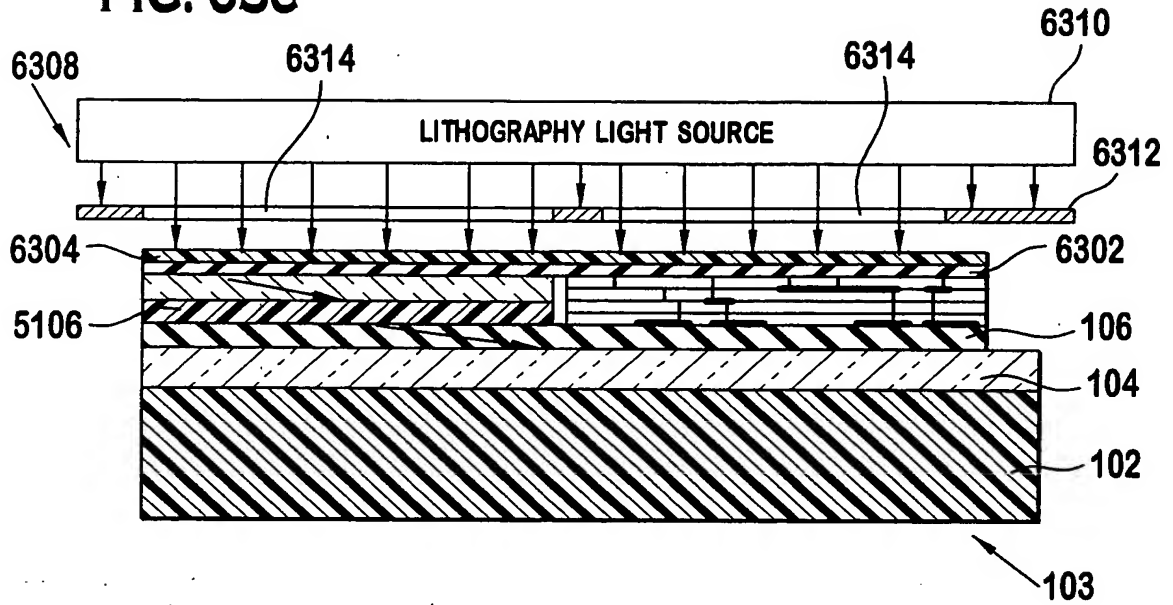
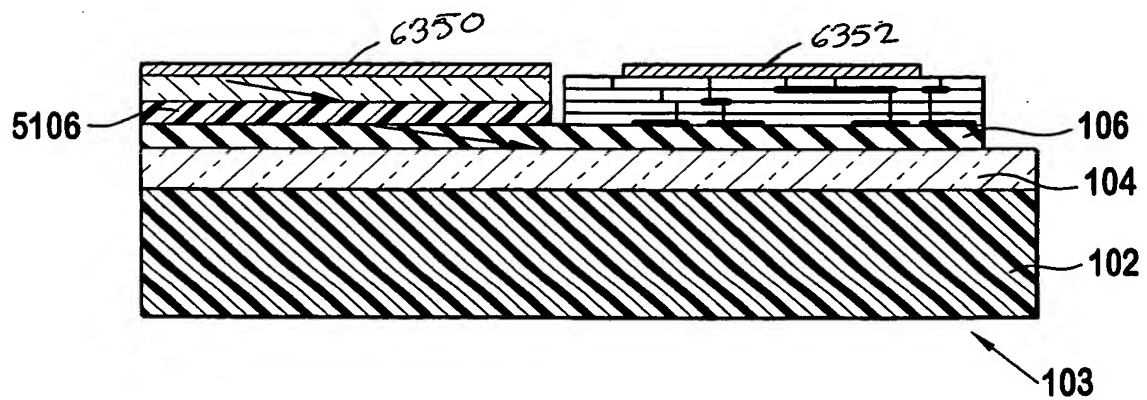


FIG. 63d



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FIG. 64

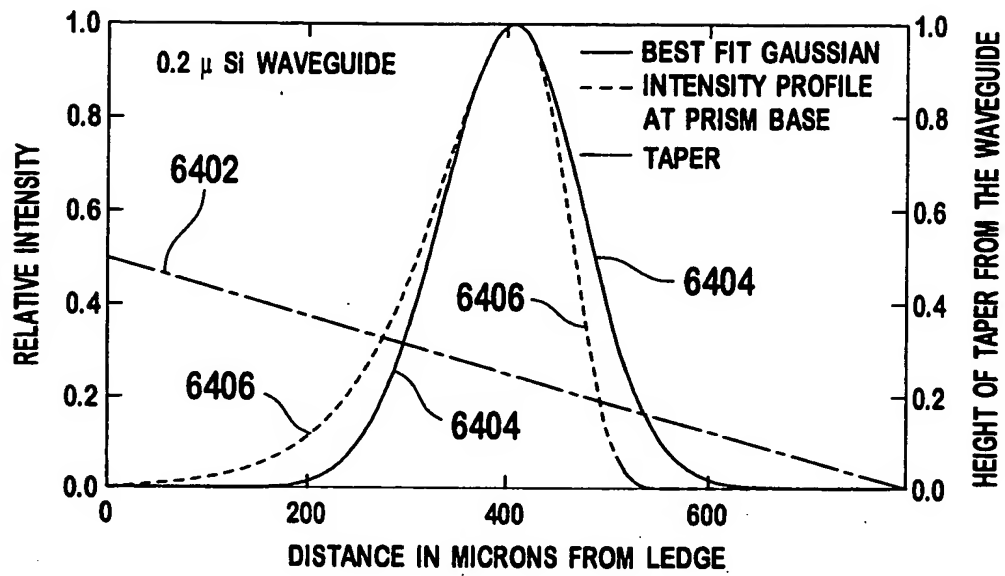
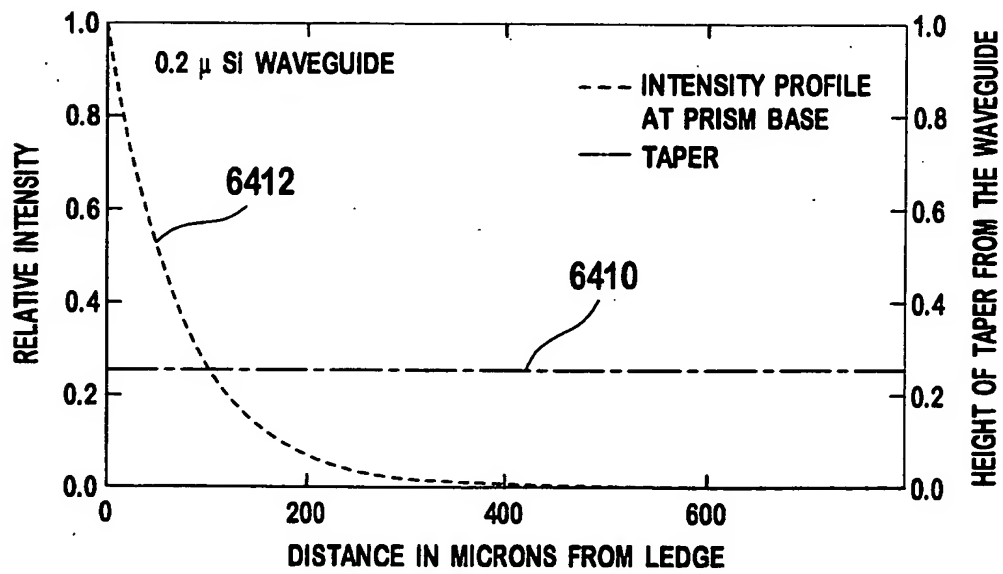


FIG. 65



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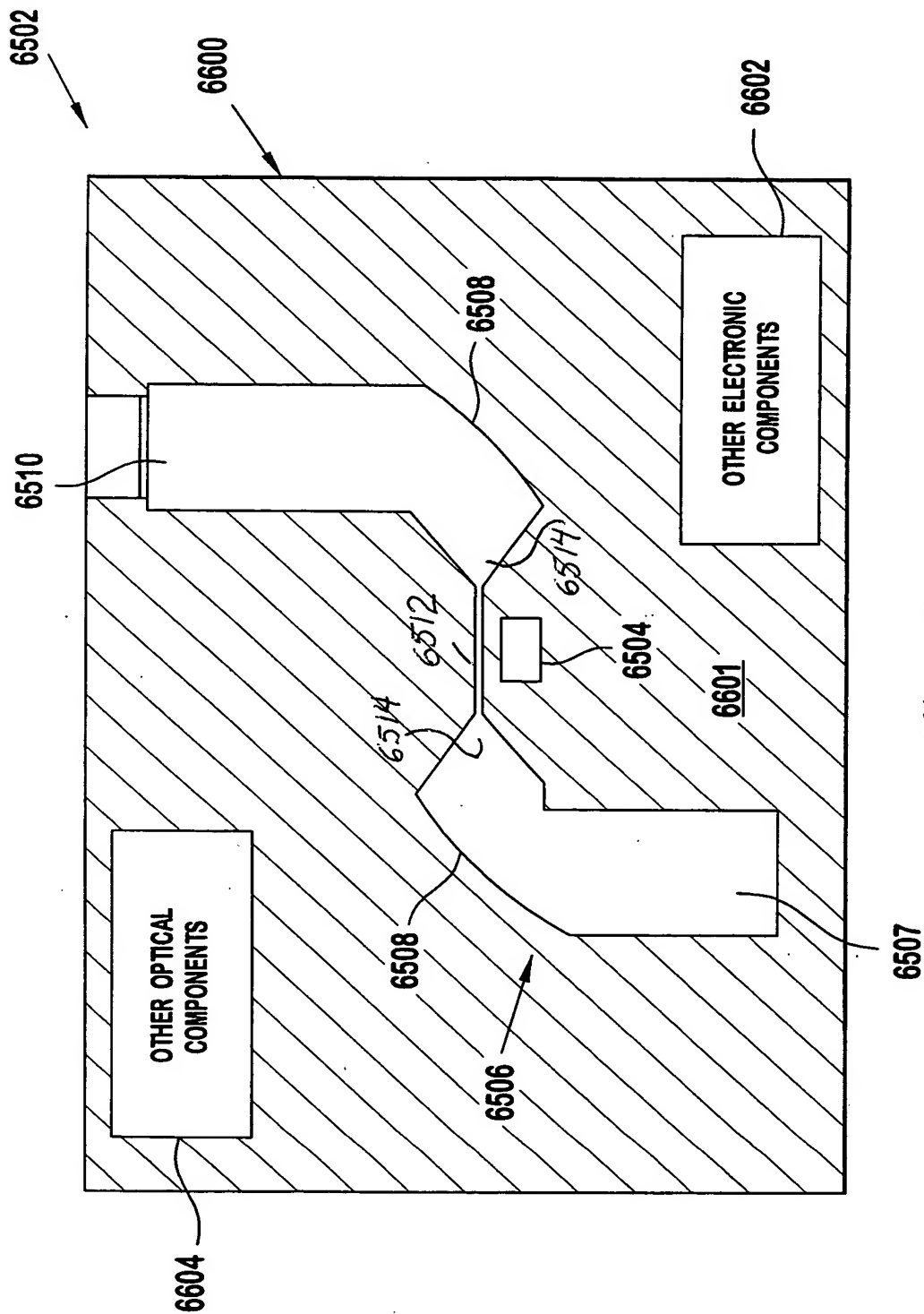


FIG. 66

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FIG. 67

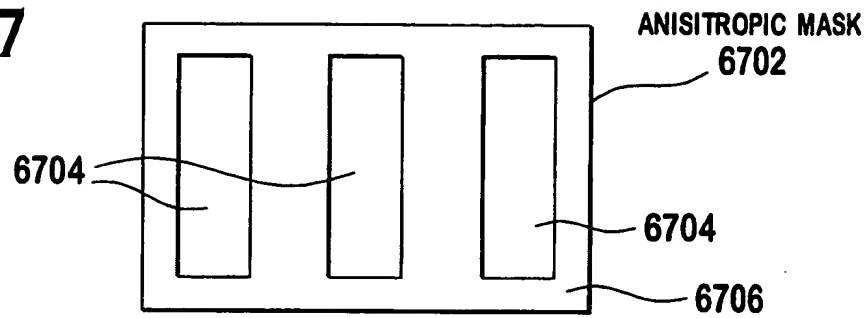


FIG. 68A



FIG. 68B

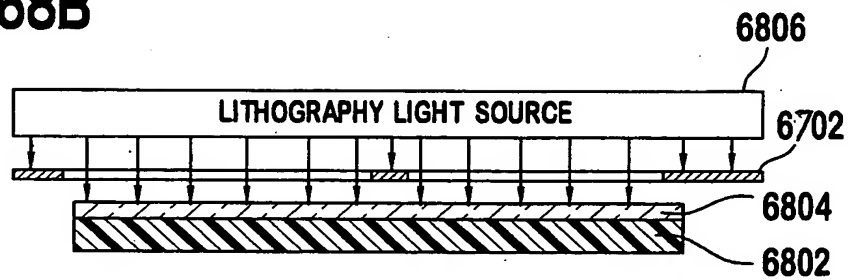
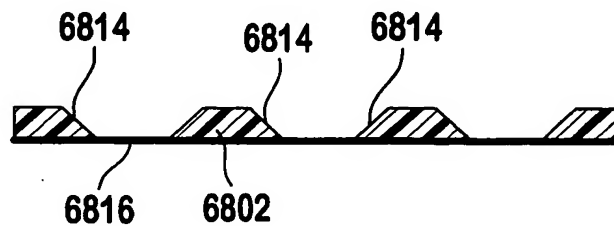


FIG. 68C



FIG. 68D



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FIG. 69

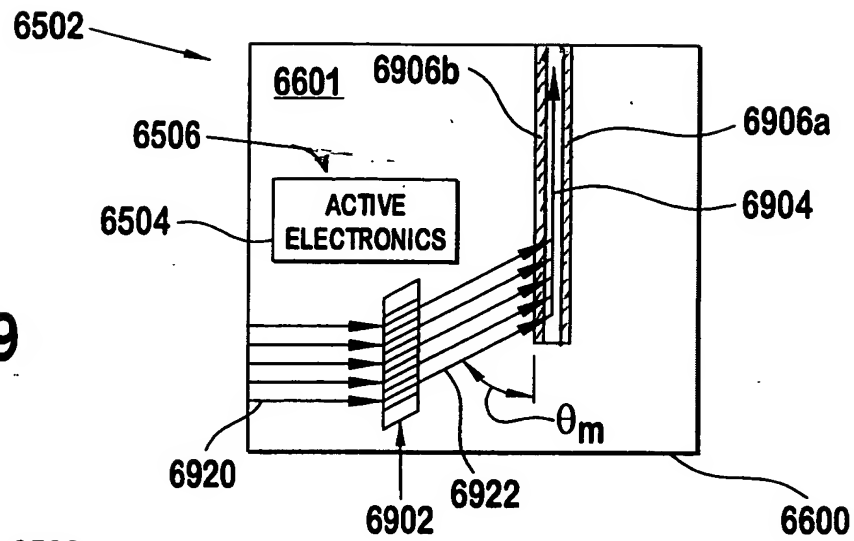


FIG. 70

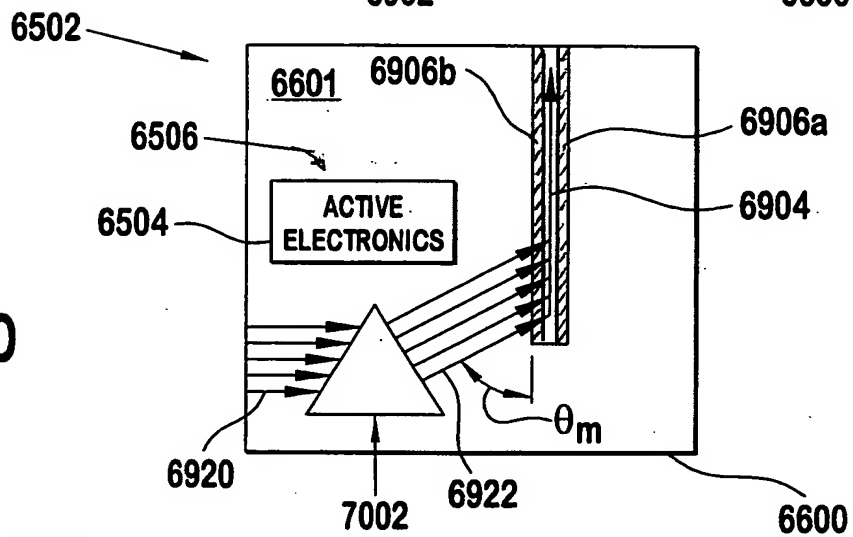
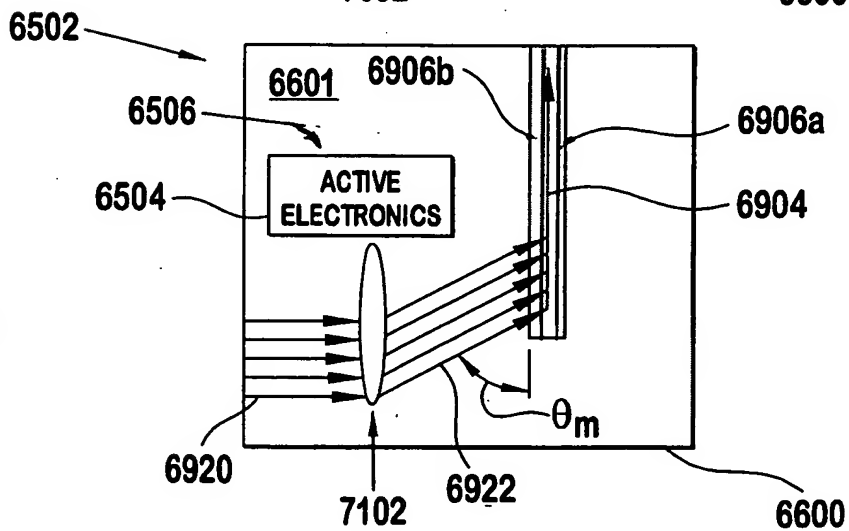
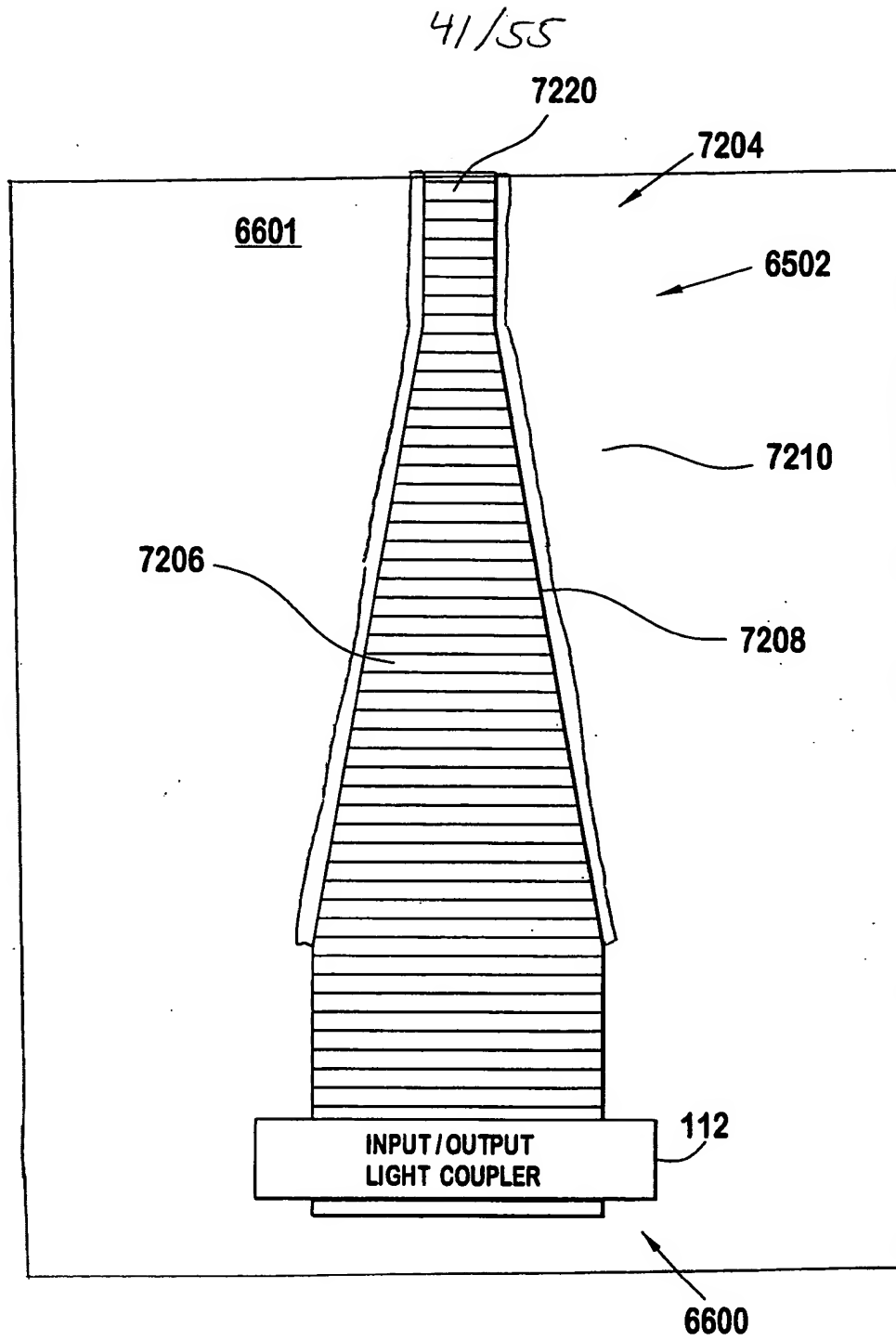


FIG. 71



**FIG. 72**

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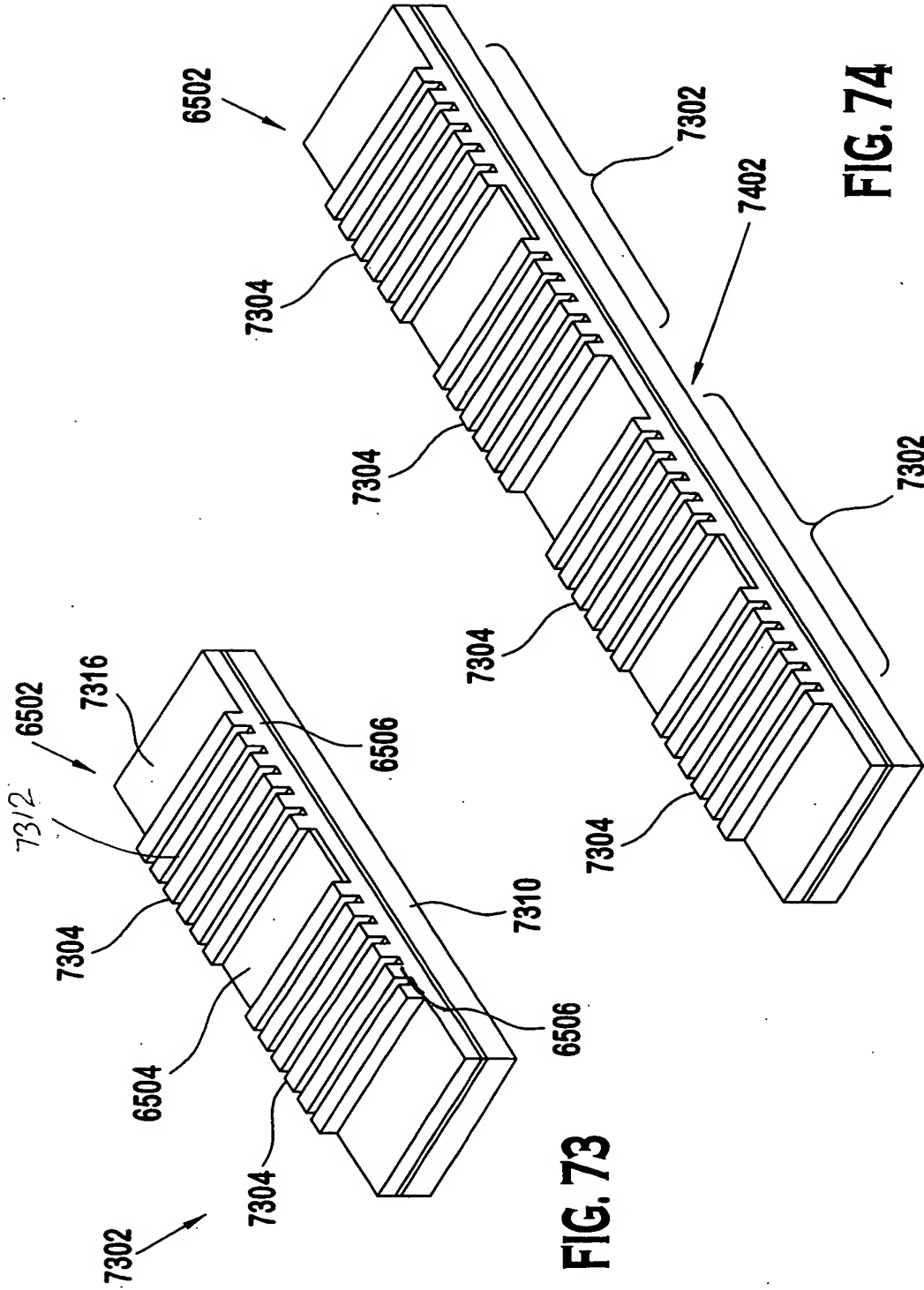
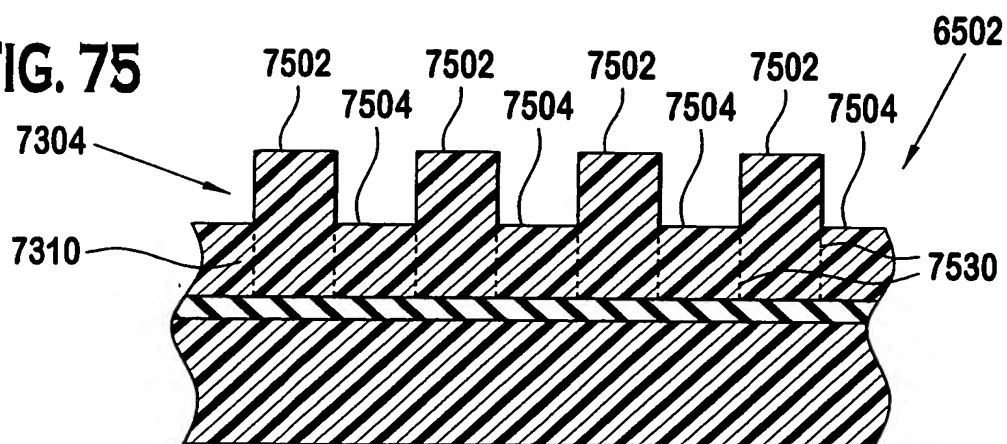
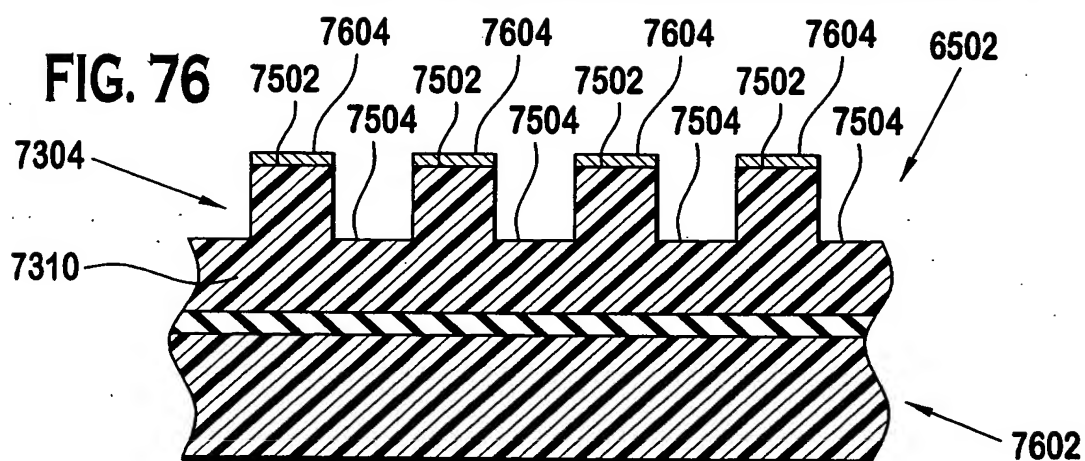
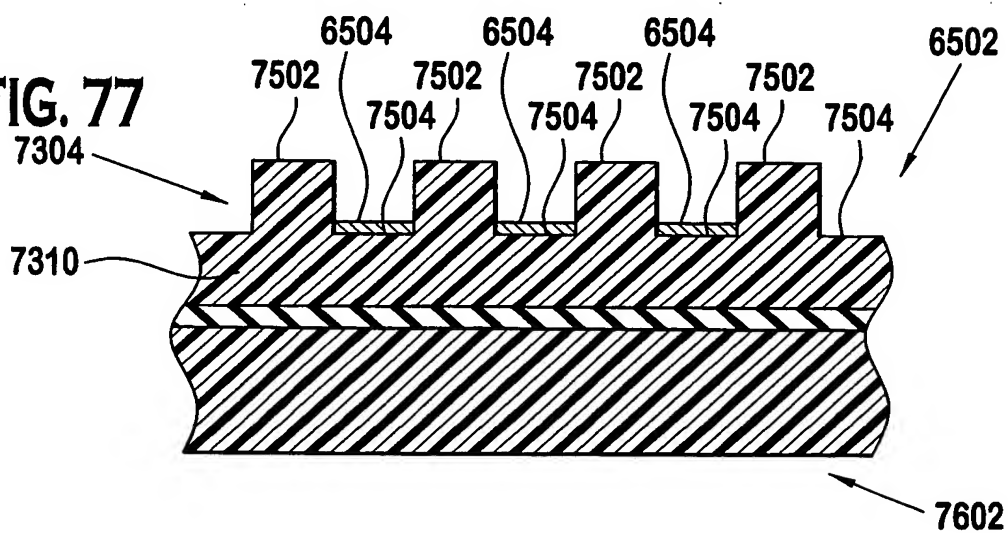


FIG. 73

FIG. 74

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FIG. 75**FIG. 76****FIG. 77**

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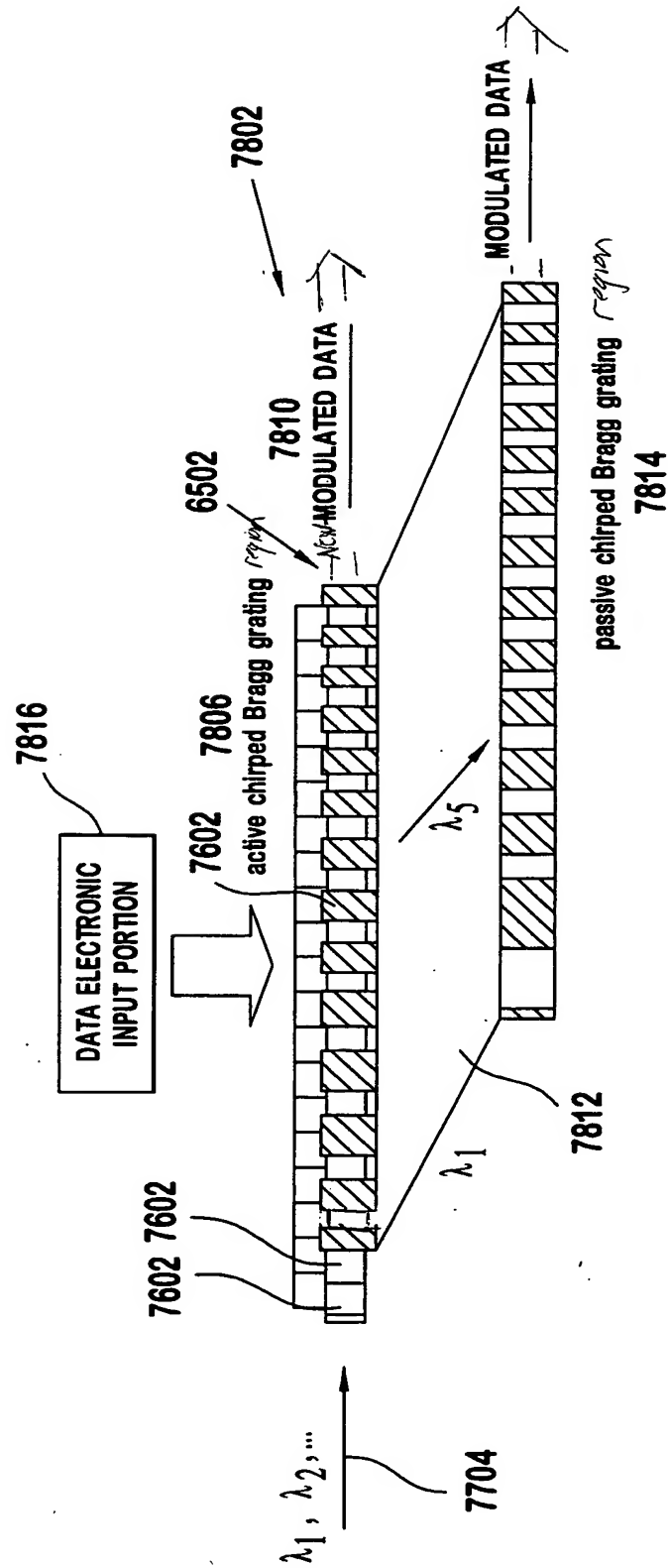


FIG. 78

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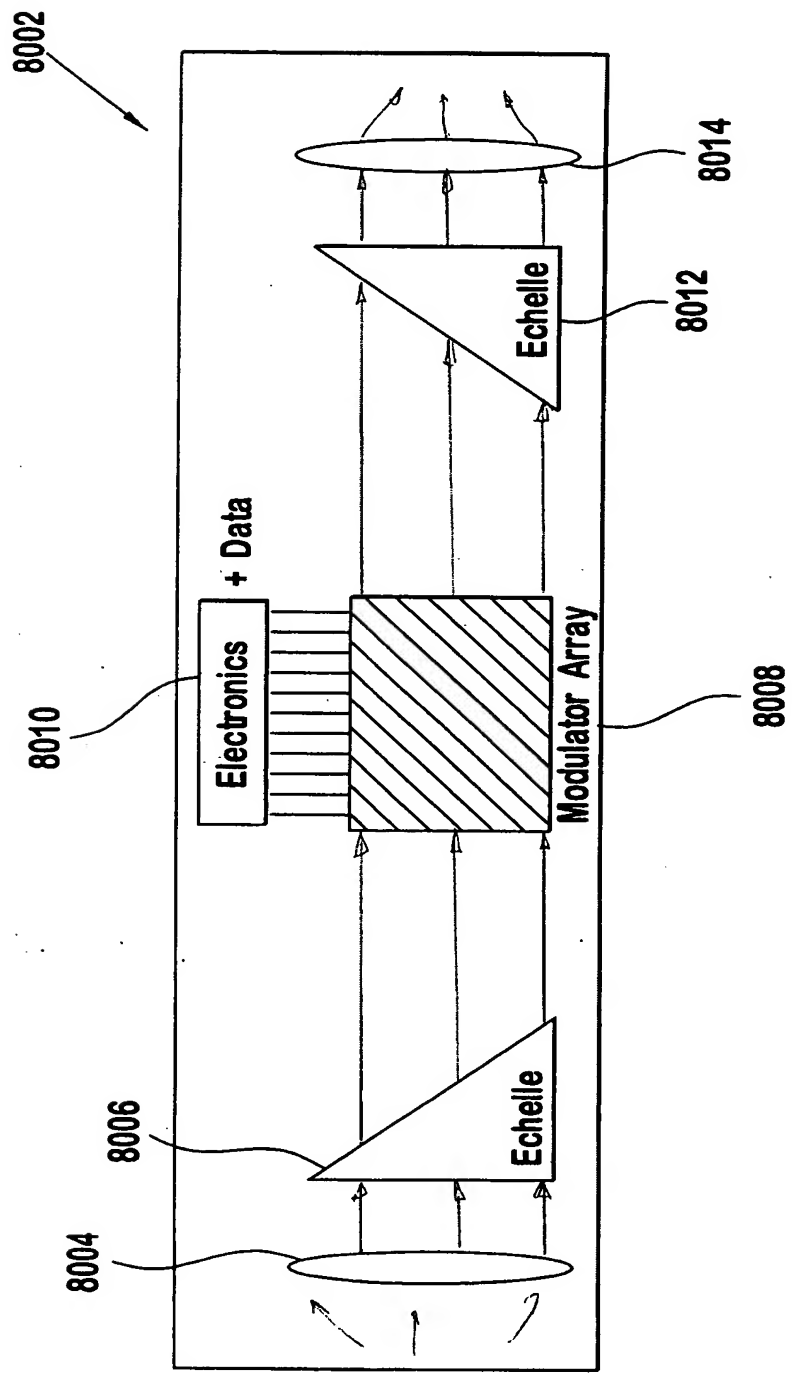


FIG. 80

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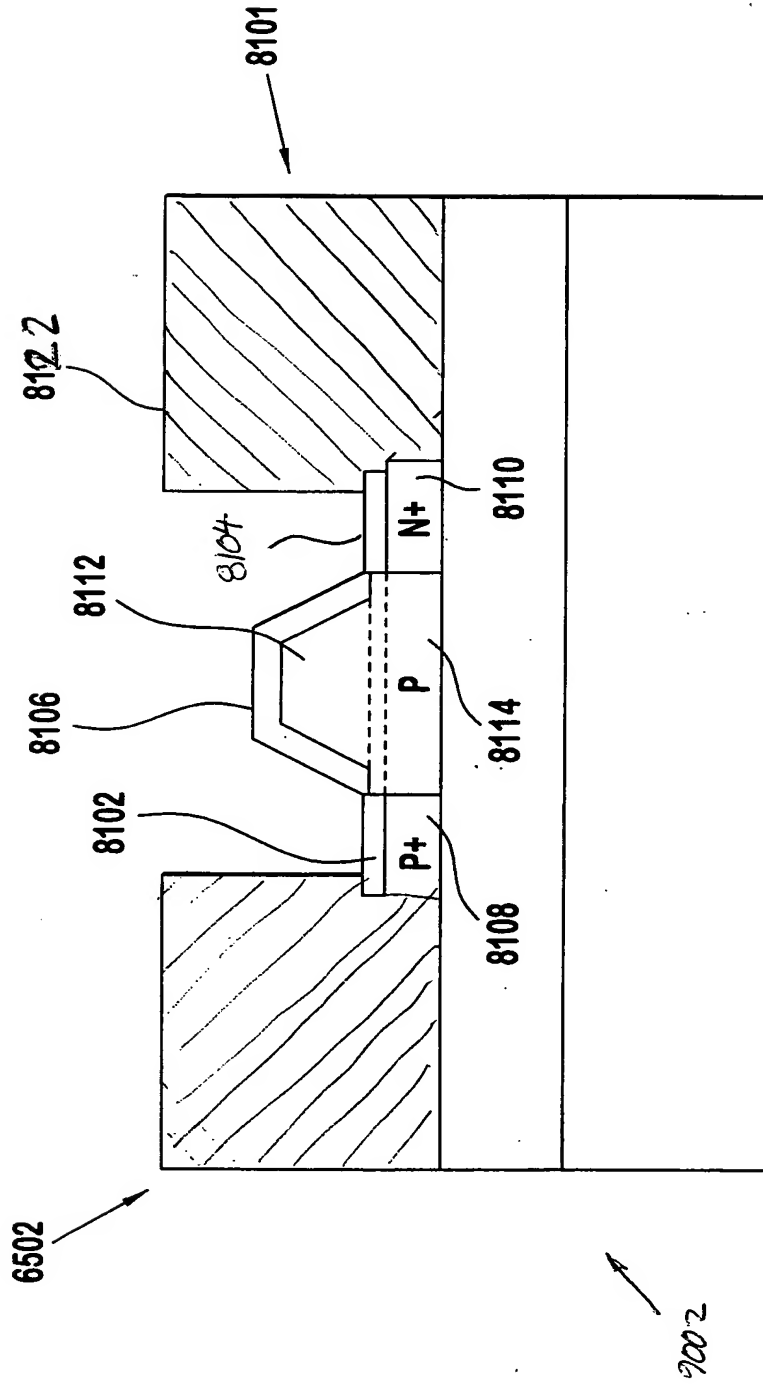
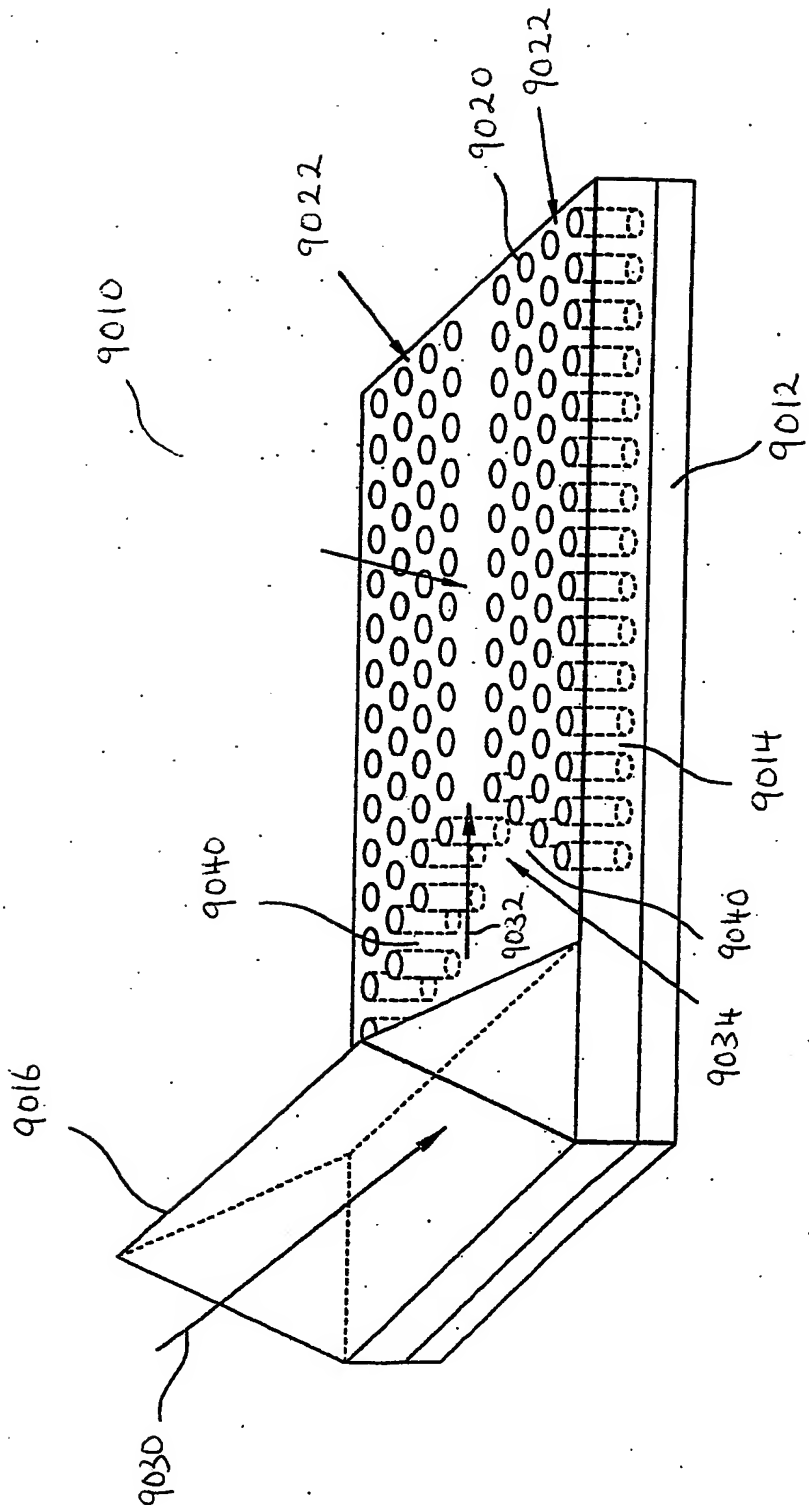


FIG. 81

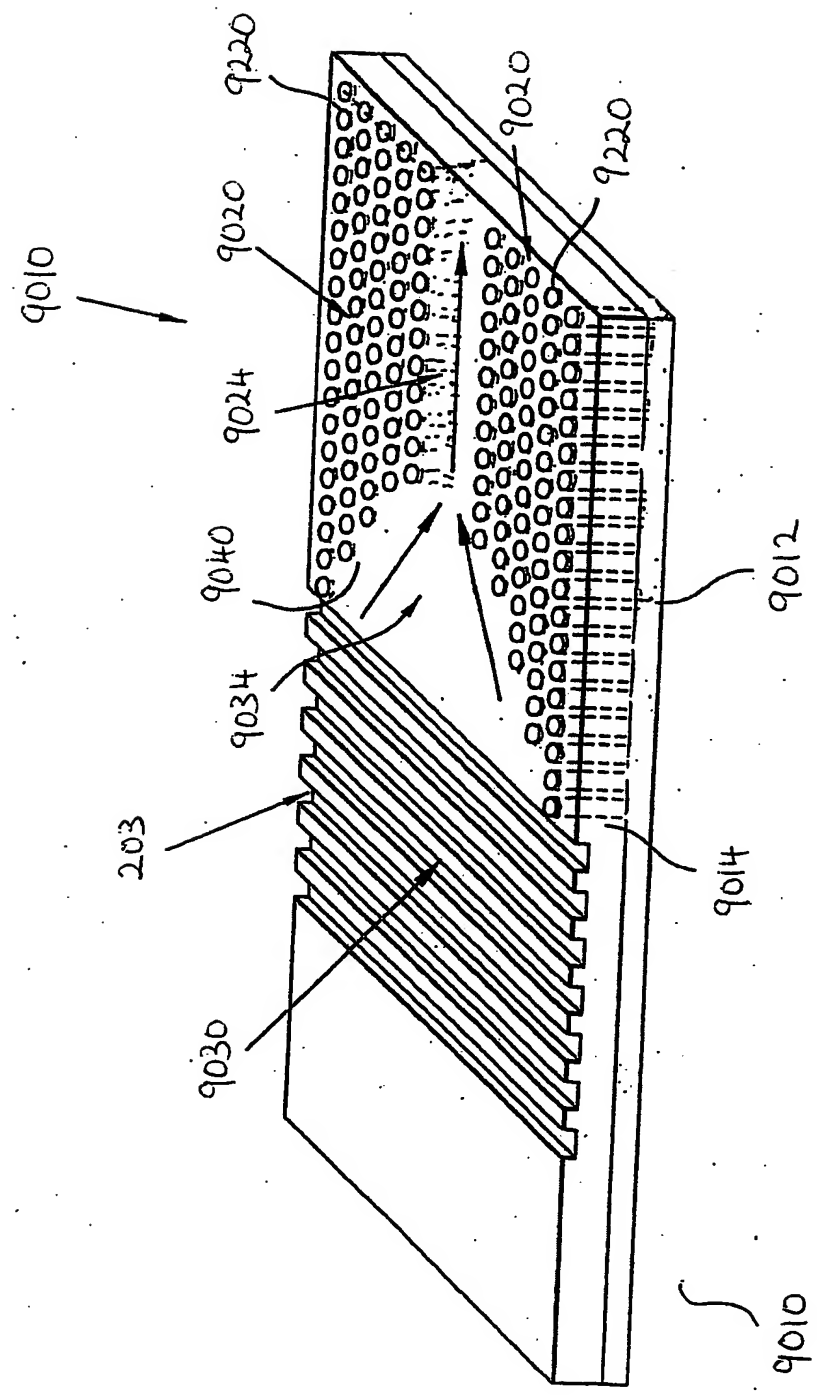
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FIG. 82



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FIG. 83



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FIG. 84

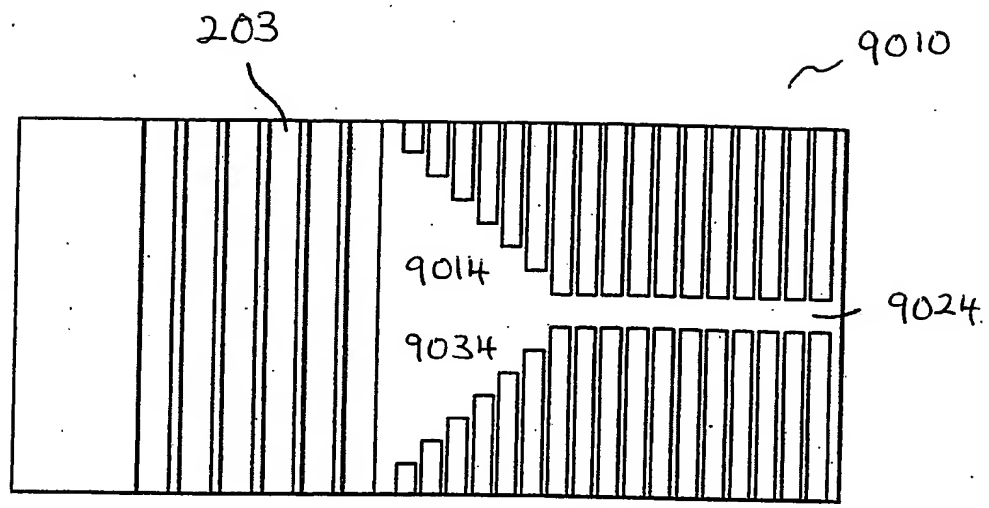
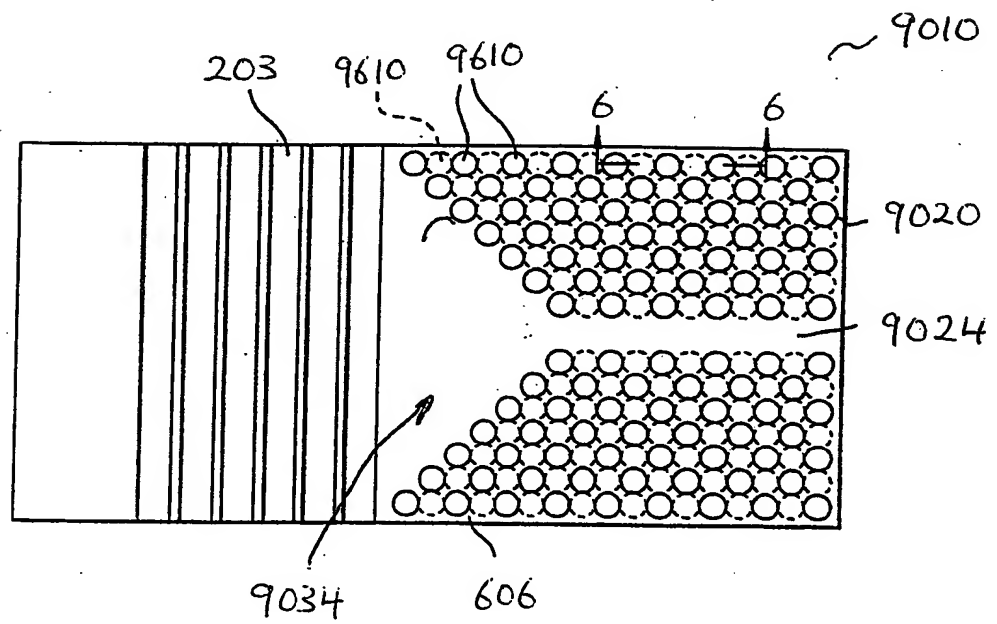


FIG. 85



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FIG. 86

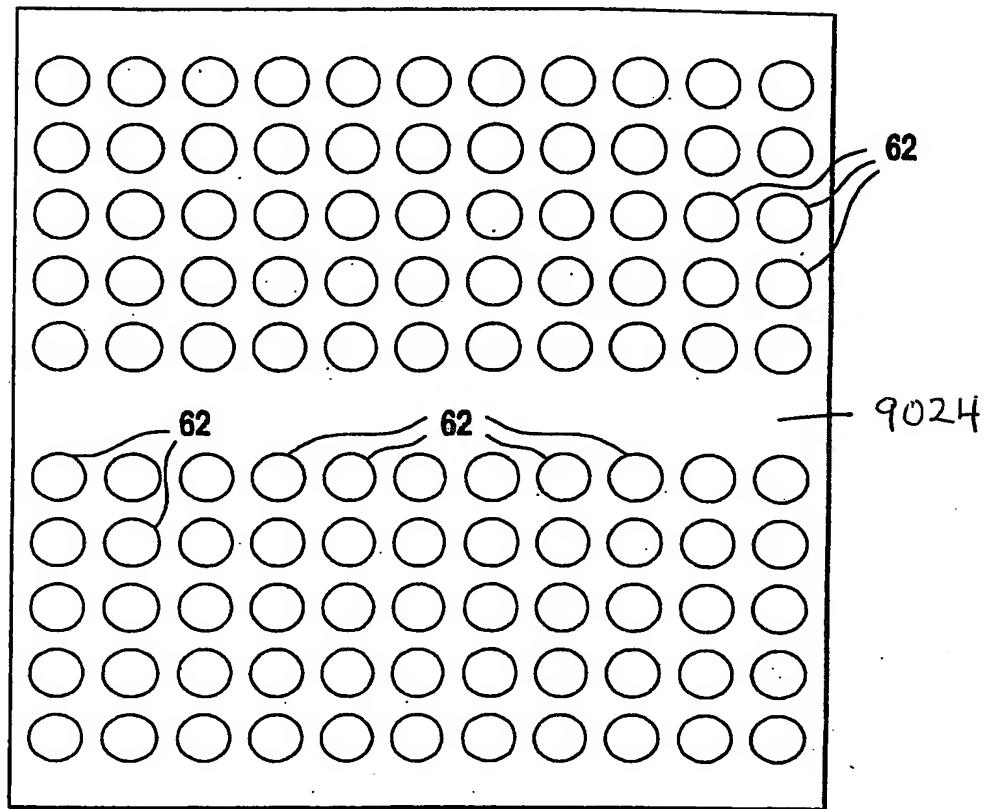
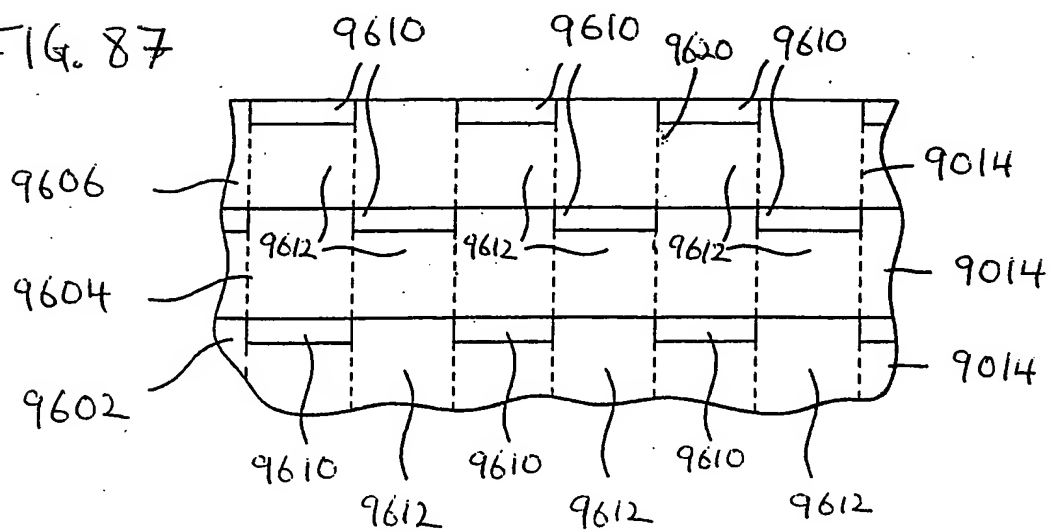
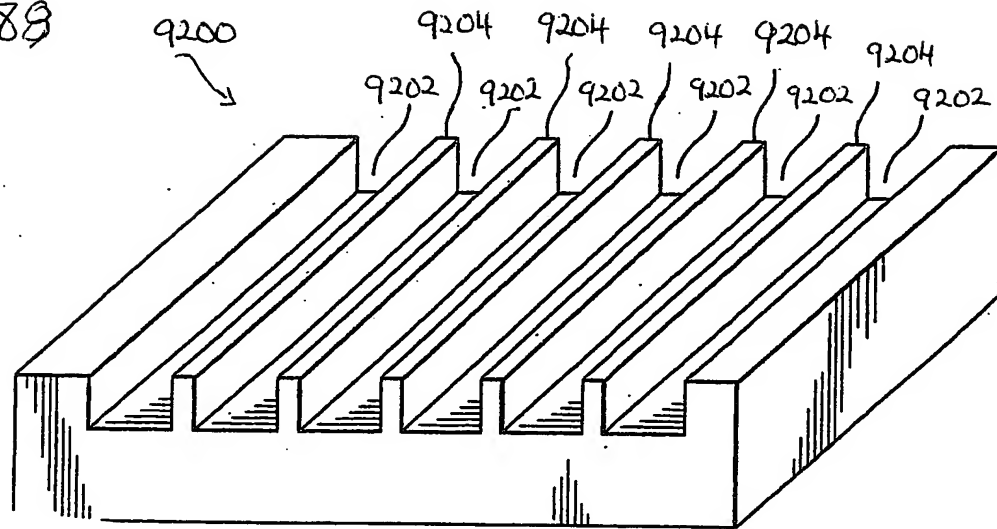


FIG. 87



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FIG. 88



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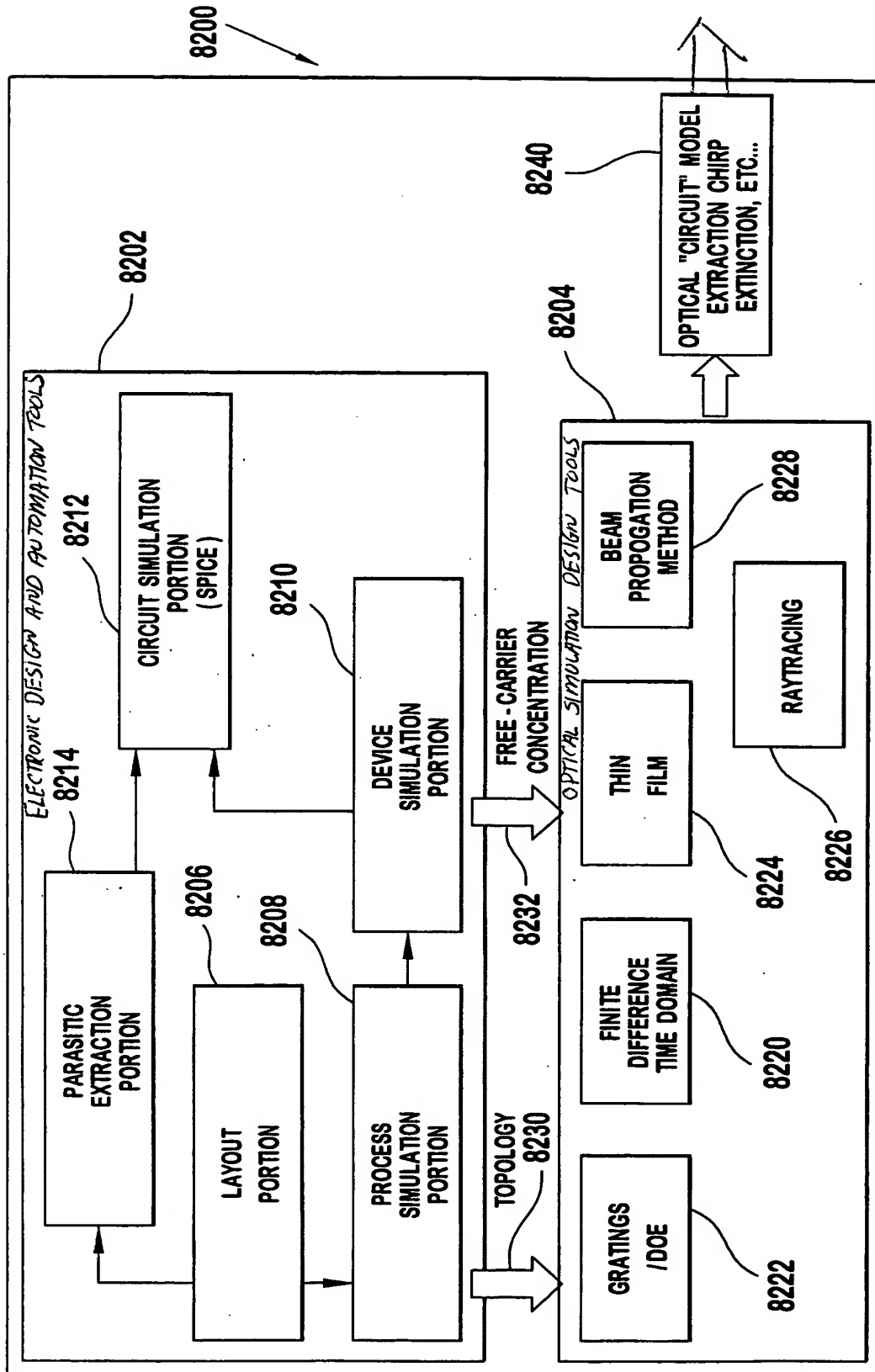


FIG. 8,9

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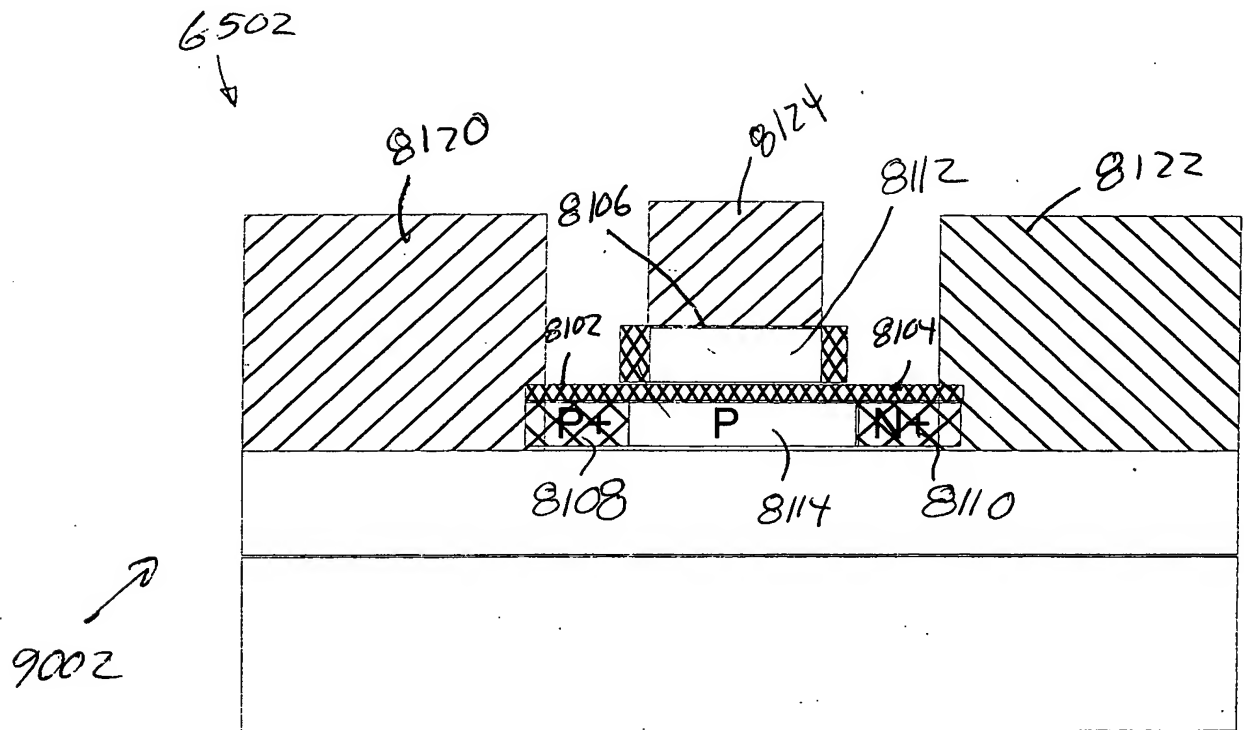


FIG. 90

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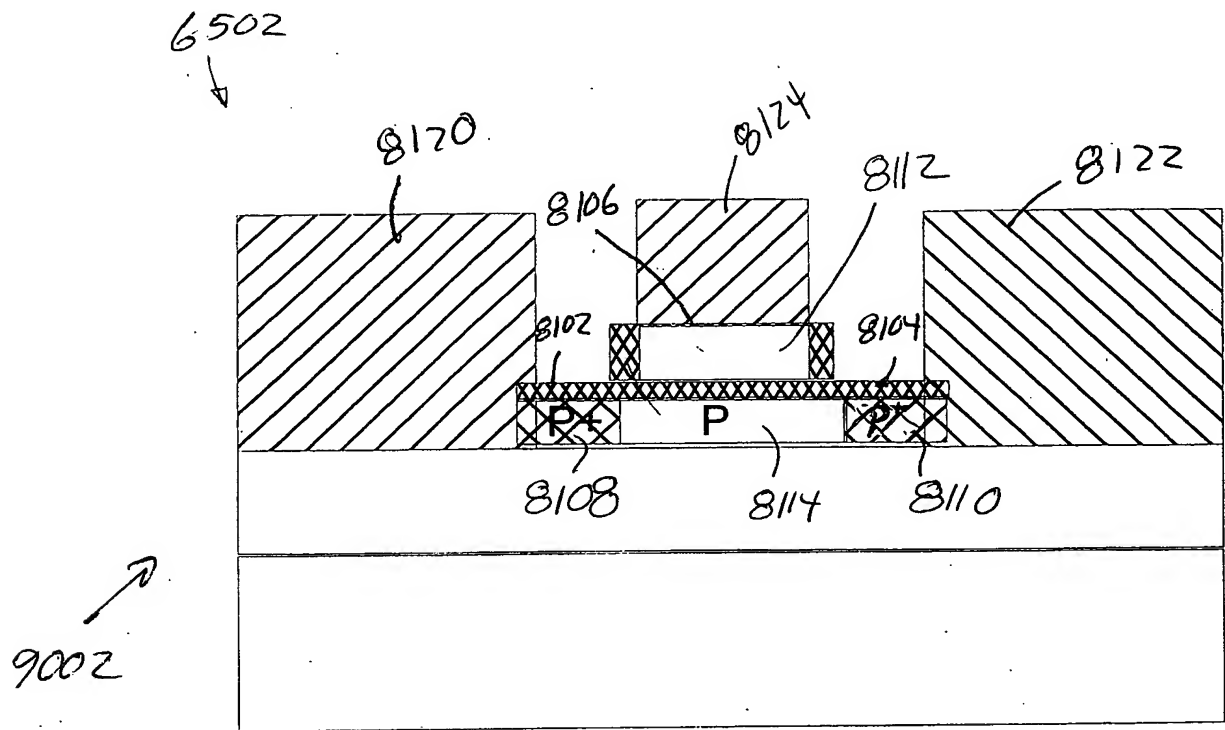


FIG. 91